POPOVA, L.; BUSH, G., inzh.; BARANOVA, P.; KUZNETSOV, P.; MER, N.; LADYGIN, A.; PREOBRAZHENSKIY, Yu.; STEPANOV, V.; BELINSKENE, A.; SHUBIN, V.; SEROV, K.; MAMYAN, K.

From speeches at a conference in Riga. Izobr.i rats. no.4:6-9 Ap '62. (MIRA 15:4)

1. Uchenyy sekretar' nauchno-metodicheskogo soveta po rabote narodnykh universitetov kul'tury Pravleniya Vsesoyuznogo obshchestva po rasprostraneniyu politicheskikh i nauchnykh znaniy (for Popov). 2. Rizhskiy myasokonservnyy kombinat (for Bush). 3. Predsedatel' L'vovskogo dorozhnogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Baranova). 4. Prorektor universiteta tekhnicheskogo tvorchestva Amurskoy oblasti (for Kuznetsov). 5. Glavnyy inzh. lokomotivnogo depo Moskva-Sortirovochnaya, zamestitel' rektora narodnogo universiteta (for Mer). 6. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Novo-Kramatorskogo mashinostroitel'nogo zavoda (for Ladygin). 7. Predsedatel' Litovskogo respublikanskogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Belinskene). 8. Zamestitel' dekana universiteta tekhnicheskogo tvorchestva pri Leningradskom Dvortse kul'tury imeni Kirova (for

(Continued on next card)

POPOVA, L. -- (Continued) Card 2.

Shubin). 9. Obshchestvennyy rektor universiteta novoy tekhniki pri Vsesoyuznom zaochnom institute inzhenerov transporta, Moskva (for Serov). 10. Obshchestvennyy direktor Kirovskanskogo instituta tekhnicheskogo tvorchestva molodykh ratsionalizatorov (for Manyan). 11. Obshchestvennyy direktor Kiyevskogo universiteta po povysheniyu tekhnicheskikh znaniy izobretateley i ratsionalizatorov (for Stepanov). 12. Obshchestvennyy rukovoditel' Bashkirskogo instituta novatorov stroitel'noy industrii (for Preobrazhenskiy).
(Riga--Technical education--Congresses)

BOBKO Yevgeniy Vasil'yevich, prof.(1890-1959); ASKINAZI, D.L., red.; BARANOVA, P.A., red.; KATALYMOVA, M.V., red.; SHLEPANOV, V.M., red.; PROKOF'YEVA, L.N., tekhn. red.

[Selected works] Izbrannye sochineniia. Moskva, Sel'khozizdat, 1963. 358 p. (MIRA 16:6)
(Bobko, Evgenii Vasil'evich, 1890-1959)
(Soil research)

BARANOVA, P. G.

BOLOTOV, Konstantin Dmitriyevich; BARANOVA, P.G., redaktor; PAVLOVA, M.M., tekhnicheskiy redaktor

[Serradella] Serradella. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1957. 31 p. (MLRA 10:10)
(Serradella)

BARANOVA P.G.

BARANOVA, P.G., red.; PEVZNER, V.I., tekhn.red.; BALLOD, A.I., tekhn.red.

[Fiber flax] Len-dolgunets. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1957. 575 p. (MIRA 11:3)
(Flax)

RAZUMOV, I.M.; CHEFRANOV, O.A.; BUSHIN, A.N.; BARANOVA, P.S.

Calculation and testing of catalyst transfer in a continuous flow. Khim. i tekh. topl. i masel 6 no. 5:39-43 My '61. (MIRA 14:5)

1. Giproneftemash.

(Catalysis)

AUTHORS: Chernyayev, I.I., Palkin, V.A., Baranova, R.A. SOV/78-3-7-8/44

TITLE: A Calorimeter for the Determination of the True Thermal Capacity of the Complex Compounds of Platinum Metals (Kalorimetr dlya opredeleniya istinnoy teployemkosti kompleksnykh soyedineniy platinovykh metallov)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1512-1520 (USSR)

ABSTRACT: The complex compounds of platinum metals decompose at temperatures of between 200 and 250°C. In order to determine thermal capacity it is necessary that investigations be carried out at temperatures below 200°C.
A calorimeter was constructed and the working scheme for its automatic adjustment to temperatures of from 200 to 250°C is described. The sensitivity of the calorimeter is $2 \cdot 10^{-3}$ cal. The necessary quantity of complex platinum compound is 3.5 - 4 g. Calibration of the calorimeter was carried out with KCl at 25°C. The thermal capacity of cis- and trans-isomers of dichlorodiamine platinum complexes was determined, and it was found that both isomers have the

Card 1/2

A Calorimeter for the Determination of the True Thermal Capacity of the Complex Compounds of Platinum Metals SOV/78-3-7-8/44

same thermal capacity within the temperature interval of 25-80°C. There are 8 figures, 5 tables, and 15 references, 13 of which are Soviet.

SUBMITTED: June 4, 1957

1. Complex compounds--Thermochemistry 2. Complex compounds --Decomposition 3. Platinum--Properties 4. Calorimeters --Calibration

Card 2/2

5.4700

69015

AUTHORS: Chernyayev, I. I., Palkin, V. A., Baranova, R. A.

S/078/60/005/04/010/040
B004/B007

TITLE: The Heats of Formation and the Specific Heats of the Tetraammine and Triammine of Bivalent Platinum

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 821 - 831 (USSR)

ABSTRACT: In the introduction, the authors refer to papers by A. F. Kapustinskiy, K. B. Yatsimirskiy, A. A. Grinberg, and B. V. Ptitsyn. For the purpose of determining the heats of formation of $[Pt(NH_3)_4]Cl_2$ and $[Pt(NH_3)_3Cl]Cl$, the heat effect produced by interaction between potassium- and ammonium-chloroplatinites with 9.4% aqueous ammonia solution was measured at 70°. For the purpose of conversion to 25°, the specific heats of all compounds taking part in the reaction as well as of their solutions were determined in a 9.4% ammonia solution within the interval of 25 to 70°, viz. for $K_2[PtCl_4]$, $(NH_4)_2[PtCl_4]$, $[Pt(NH_3)_4]Cl_2$, $[Pt(NH_3)_3Cl]Cl$, KCl, and NH_4Cl. The calorimeter and the method are described in references 1-4. Dehydration and treatment of hygroscopic tetraammine is dealt with in reference 2. Tables 1

Card 1/2

The Heats of Formation and the Specific Heats of the Tetraammine and Triammine of Bivalent Platinum

S/078/60/005/03/010/040
B004/B007

and 2 give the measured heat effects of the reactions with an NH_3 solution as well as the solution heats. The results obtained by measuring specific heat are given in table 3, and are graphically represented in a figure. Within the investigated region, all specific heats depend linearly on temperature. The angle of inclination of the straight line in the diagram: specific heat - temperature increases with an increase in the number of ammonia molecules in the inner sphere of the ammine complexes of Pt(II). The authors mention their calculation of the heats of formation of $[Pt(NH_3)_4]Cl_2$ (177.1 kcal/mol) and $[Pt(NH_3)_3Cl]Cl$ (147.5 kcal/mol). As the heat of formation was calculated as the algebraic sum of a large number of summands, the authors estimate the error at ± 1 kcal/mol or $\pm 0.6\%$. The chemical analysis of the compounds investigated was carried out by M.N. Lyashenko. There are 1 figure, 3 tables, and 12 references, 9 of which are Soviet.

SUBMITTED: January 23, 1959

Card 2/2

S/078/60/005/007/018/043/XX
B004/B060

AUTHORS: Chernyayev, I. I., Palkin, V. A., Baranova, R. A., Kuz'mina, N. N.

TITLE: Formation Heats and Specific Heats of Chloro Ammine Compounds of Bivalent Platinum

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7, pp. 1428 - 1440

TEXT: The authors attempted to improve the accuracy of data so far available on the formation heat and specific heat of chloro ammine complexes of Pt^{II}, and to fill the gap for compounds hitherto left unconsidered. For their purposes, they made use of a specially designed calorimeter, a description of which is given in Ref.12. The heat effect of $NH_4[PtNH_3Cl_3]$ interaction with a 9.4% ammonia solution was measured at 70°C, as well as the specific heat of compounds $[Pt(NH_3)_3Cl]\cdot[PtNH_3Cl_3]$; $[Pt(NH_3)_3Cl]_2\cdot[PtCl_4]$; $NH_4[PtNH_3Cl_3]$, and $[Pt(NH_3)_4]\cdot[PtNH_3Cl_3]_2$ between

Formation Heats and Specific Heats of Chloro Ammine Compounds of Bivalent Platinum

S/078/60/005/007/018/043/XX
B004/B060

25° and 70°C. The synthesis of these compounds is briefly described, and analytical data are given. The crystallo-optical analysis (for $[Pt(NH_3)_3Cl]\cdot[PtNH_3Cl_3]$ made by M. M. Lyashenko) confirmed the absence of impurities. The specific heats found for compounds $[Pt(NH_3)_3Cl]\cdot[PtNH_3Cl_3]$ and $[Pt(NH_3)_3Cl]_2\cdot[PtCl_4]$ are given in Tables 1,2, Figs.1,2. Here, the spread of experimental data was ±1%. By allowing temperature in the calorimeter to rise more rapidly, the spread for the other compounds (Tables 3,4, Figs.3,4) was reduced to 0.5%. The formation heats of $NH_4[PtNH_3Cl_3]$ and of the isomers of the composition $(PtCl_2\cdot 2NH_3)_n$, (n = 1,2,3) were determined on the basis of the corresponding thermochemical cyclic processes according to Hess. Calculated heat effects of the interaction of the following compounds with gaseous NH_3 are indicated ($_{sd}$ = solid):

$(NH_4)_2[PtCl_4]_{sd} + 4NH_{3\ gas} = [Pt(NH_3)_4]Cl_{2\ sd} + 2NH_4Cl_{sd} + 88.4$ kcal/mole

$K_2[PtCl_4]_{sd} + 4NH_{3\ gas} = [Pt(NH_3)_4]Cl_{2\ sd} + 2KCl_{sd} + 86.9$ kcal/mole

$NH_4[PtNH_3Cl_3]_{sd} + 3NH_{3\ gas} = [Pt(NH_3)_4]Cl_{2\ sd} + NH_4Cl_{sd} + 66.8$ kcal/mole

cis-$[Pt(NH_3)_2Cl_2]_{sd}$ + $2NH_{3\ gas}$ = $[Pt(NH_3)_4]Cl_{2\ sd}$ + 40.0 kcal/mole

trans-$[Pt(NH_3)_2Cl_2]_{sd}$ + $2NH_{3\ gas}$ = $[Pt(NH_3)_4]Cl_{2\ sd}$ + 37.0 kcal/mole

$[Pt(NH_3)_3Cl]_2 \cdot [PtNH_3Cl_3]_{sd}$ + $2 \cdot 2NH_{3\ gas}$ = $2\,[Pt(NH_3)_4]Cl_{2\ sd}$ + 2·39.9kcal/mole

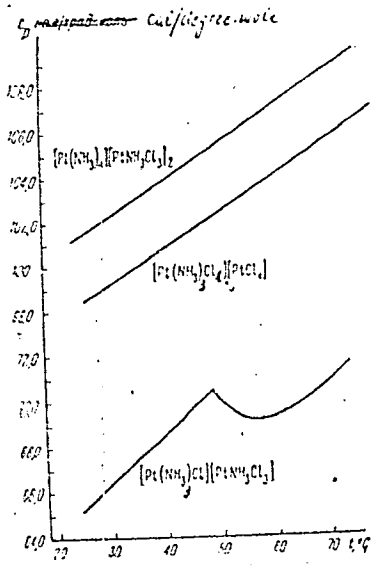
$[Pt(NH_3)_3Cl]_2 \cdot [PtCl_4]_{sd}$ + $3 \cdot 2NH_{3\ gas}$ = $3\,[Pt(NH_3)_4]Cl_{2\ sd}$ + 3·37.9 kcal/mole

$[Pt(NH_3)_4] \cdot [PtNH_3Cl_3]_2$ + $3 \cdot 2NH_{3\ gas}$ = $3\,[Pt(NH_3)_4]Cl_{2\ sd}$ + 3·39.2 kcal/mole

$[Pt(NH_3)_3Cl]Cl_{sd}$ + $NH_{3\ gas}$ = $[Pt(NH_3)_4]Cl_{2\ sd}$ + 18.5 kcal/mole. Fig.2 shows the molar specific heats of all compounds of the Werner-Miolatti series, and compares them with the values for $NaNO_3$ and KNO_3 supplied by V. A. Sokolov and N. Ye. Shmidt. The molar specific heats of trimer and dimer of the composition $n(PtCl_2 \cdot 2NH_3)$ are shown in Fig.6: Molar specific heats.

Formation Heats and Specific Heats of Chloro Ammine Compounds of Bivalent Platinum

S/078/60/005/007/018/043/XX
B004/B060



A striking aspect is the anomaly of $[Pt(NH_3)_3Cl] \cdot [PtNH_3Cl]$ at 48°C, as is characteristic of a phase transformation of the second order. Table 6 gives the following formation heats: $[Pt(NH_3)_4]Cl_2$, $-\Delta H$ = 177.1 kcal/mole; $[Pt(NH_3)_3Cl]Cl$, $-\Delta H$ = 147.5 kcal/mole; $NH_4[PtNH_3Cl_3]$, $-\Delta H$ = 152.6 kcal/mole; cis-$[Pt(NH_3)_2Cl_2]$, $-\Delta H$ = 115.0 kcal/mole; trans-$[Pt(NH_3)_2Cl_2]$, $-\Delta H$ = 118.0 kcal/mole; $[Pt(NH_3)_3Cl] \cdot [PtNH_3Cl_3]$, $-\Delta H$=230 kcal/mole; $[Pt(NH_3)_3Cl]_2 \cdot [PtCl_4]$, $-\Delta H$ = 351 kcal/mole; $[Pt(NH_3)_4] \cdot [PtNH_3Cl_3]_2$, $-\Delta H$=348 kcal/mole.

A paper by A. D. Gel'man is mentioned.

Card 4/5

86460

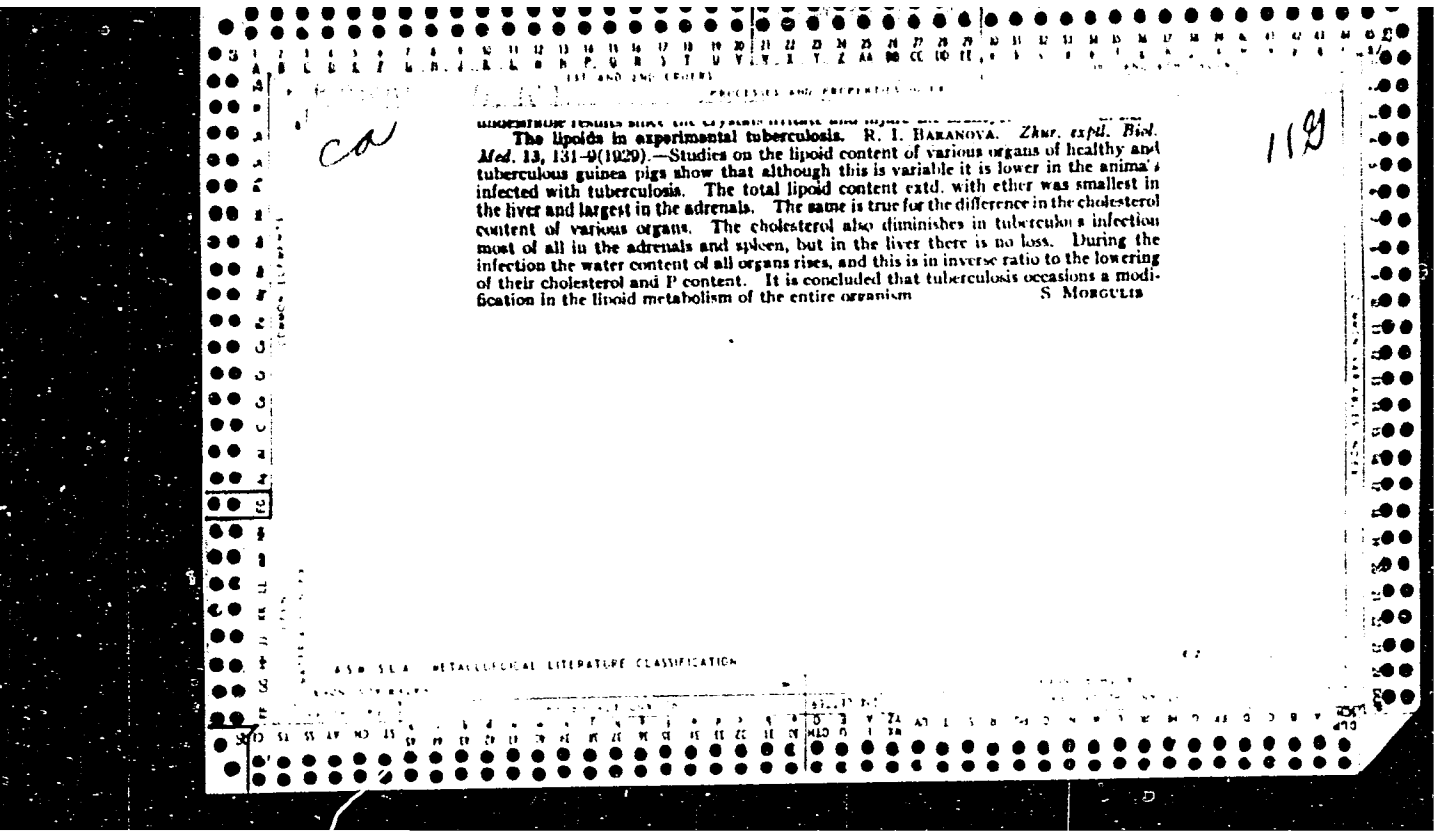
Formation Heats and Specific Heats of Chloro Ammine Compounds of Bivalent Platinum

S/078/60/005/007/018/043/XX
B004/B060

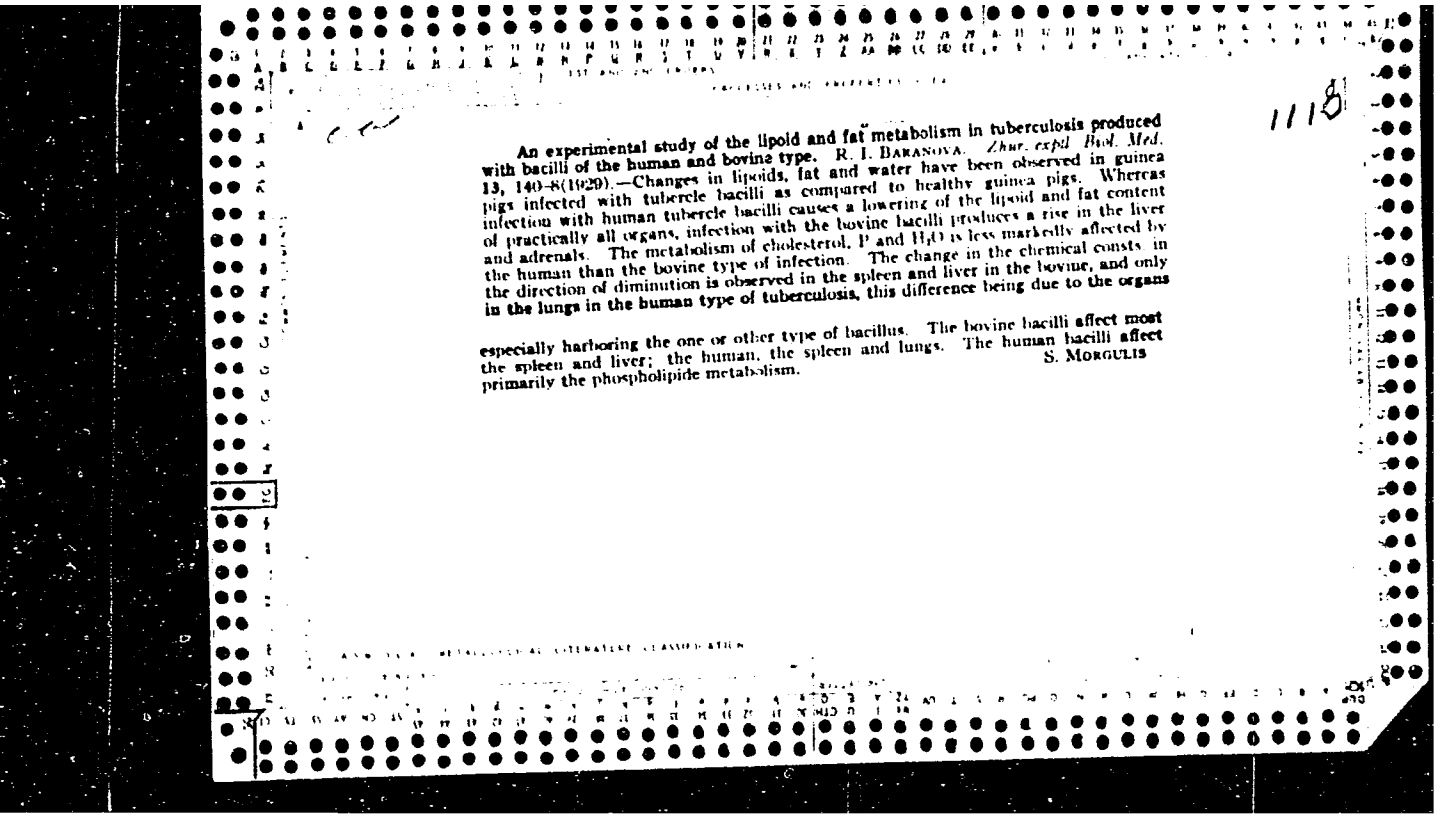
There are 6 figures, 6 tables, and 21 references: 18 Soviet, 1 US, and 3 French.

SUBMITTED: March 3, 1959

Card 5/5



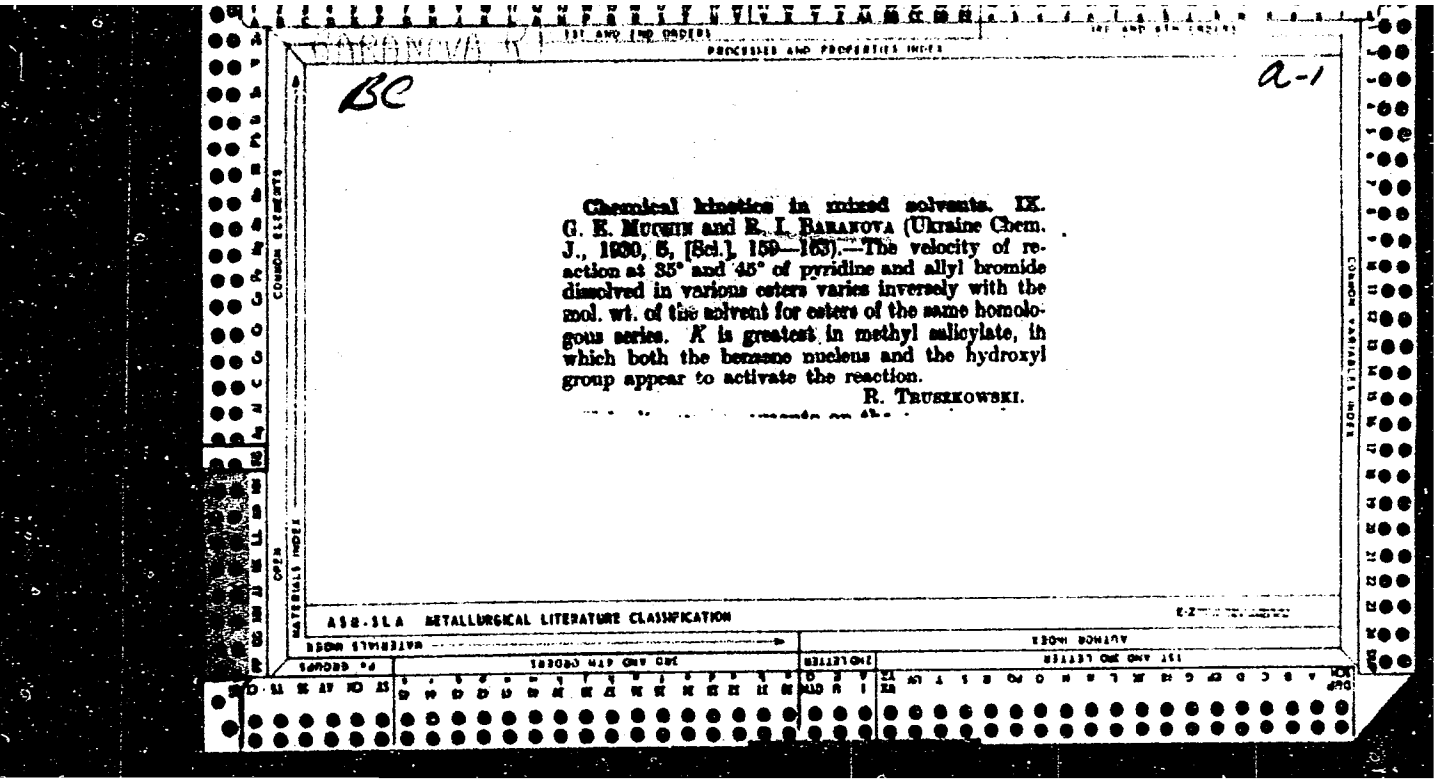
The lipoids in experimental tuberculosis. R. I. Baranova. *Zhur. exptl. Biol. Med.* **13**, 131–9(1929).—Studies on the lipoid content of various organs of healthy and tuberculous guinea pigs show that although this is variable it is lower in the animals infected with tuberculosis. The total lipoid content extd. with ether was smallest in the liver and largest in the adrenals. The same is true for the difference in the cholesterol content of various organs. The cholesterol also diminishes in tuberculous infection most of all in the adrenals and spleen, but in the liver there is no loss. During the infection the water content of all organs rises, and this is in inverse ratio to the lowering of their cholesterol and P content. It is concluded that tuberculosis occasions a modification in the lipoid metabolism of the entire organism S Morgulis



1118

An experimental study of the lipoid and fat metabolism in tuberculosis produced with bacilli of the human and bovine type. R. I. Baranova. *Zhur. exptl. Biol. Med.* 13, 140–8(1929).—Changes in lipoids, fat and water have been observed in guinea pigs infected with tubercle bacilli as compared to healthy guinea pigs. Whereas infection with human tubercle bacilli causes a lowering of the lipoid and fat content of practically all organs, infection with the bovine bacilli produces a rise in the liver and adrenals. The metabolism of cholesterol, P and H_2O is less markedly affected by the human than the bovine type of infection. The change in the chemical consts. in the direction of diminution is observed in the spleen and liver in the bovine, and only in the lungs in the human type of tuberculosis, this difference being due to the organs especially harboring the one or other type of bacillus. The bovine bacilli affect most the spleen and liver; the human, the spleen and lungs. The human bacilli affect primarily the phospholipide metabolism.

S. Morgulis

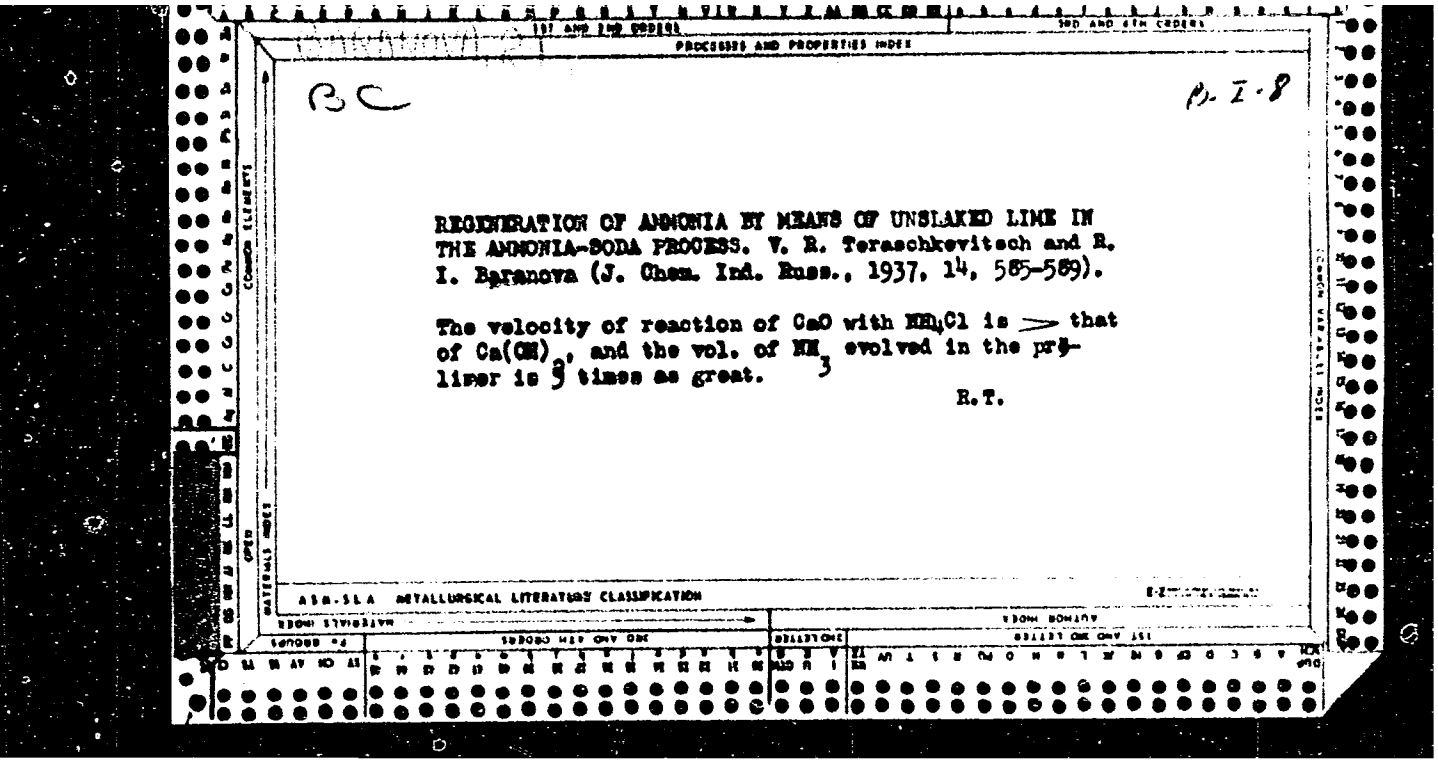


BC

a-1

Chemical kinetics in mixed solvents. IX. G. K. Mukhin and R. I. Baranova (Ukraine Chem. J., 1930, 5, [Sci.], 159—163).—The velocity of reaction at 35° and 45° of pyridine and allyl bromide dissolved in various esters varies inversely with the mol. wt. of the solvent for esters of the same homologous series. K is greatest in methyl salicylate, in which both the benzene nucleus and the hydroxyl group appear to activate the reaction.

R. Truszkowski.



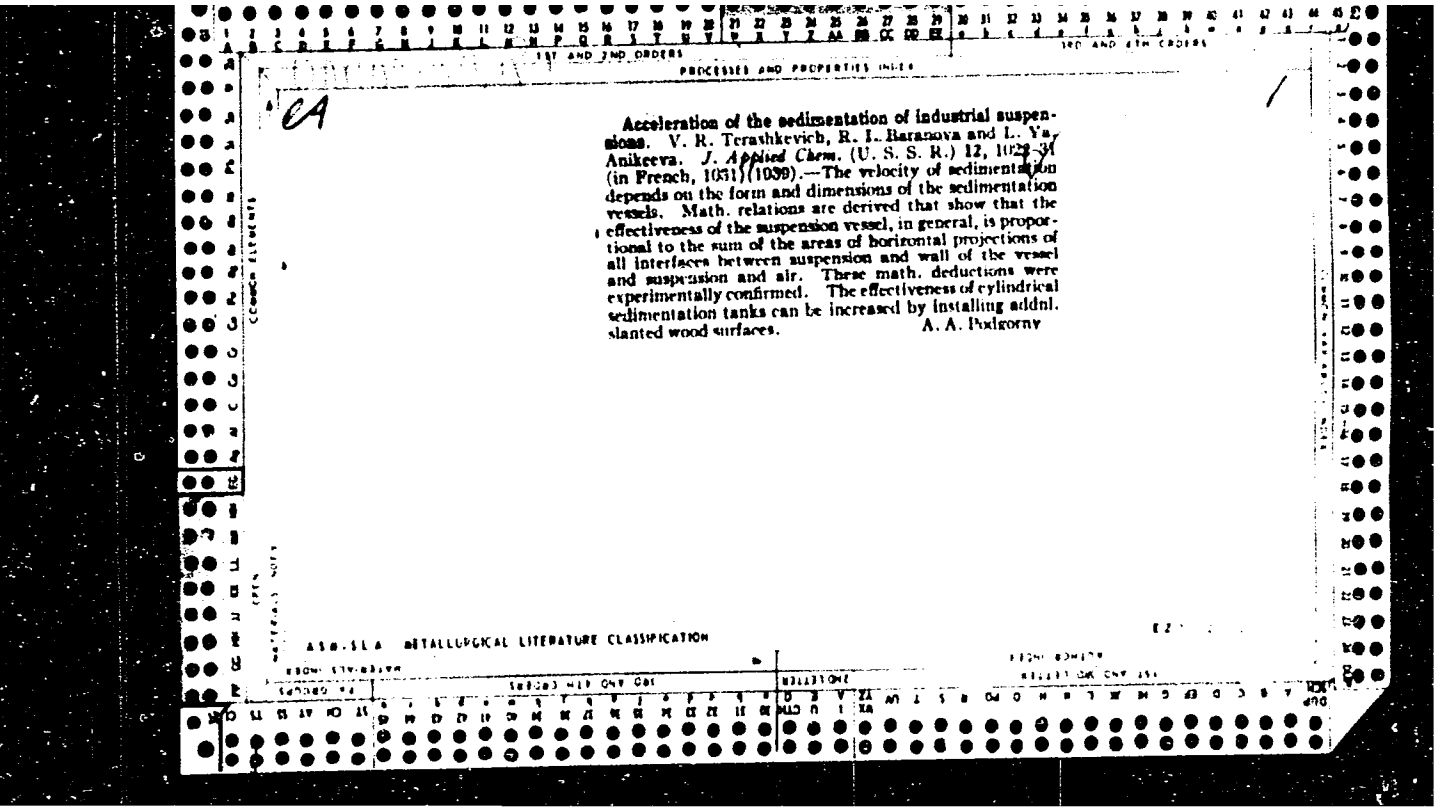
BC

B. I. 8

REGENERATION OF AMMONIA BY MEANS OF UNSLAKED LIME IN THE AMMONIA-SODA PROCESS. V. R. Terashkevitsch and R. I. Baranova (J. Chem. Ind. Russ., 1937, 14, 585-589).

The velocity of reaction of CaO with NH_4Cl is > that of $Ca(OH)_2$, and the vol. of NH_3 evolved in the prelimr is 3 times as great.

R.T.



CA

Acceleration of the sedimentation of industrial suspensions. V. R. Terashkevich, R. I. Baranova and L. Ya. Anikeeva. *J. Applied Chem.* (U. S. S. R.) 12, 1029–31 (in French, 1031)(1939).—The velocity of sedimentation depends on the form and dimensions of the sedimentation vessels. Math. relations are derived that show that the effectiveness of the suspension vessel, in general, is proportional to the sum of the areas of horizontal projections of all interfaces between suspension and wall of the vessel and suspension and air. These math. deductions were experimentally confirmed. The effectiveness of cylindrical sedimentation tanks can be increased by installing addnl. slanted wood surfaces. A. A. Podgorny

BARANOVA, R.Kh.; GUKHMAN, G.A.; OKHOTIN, A.S.; EYDINOVA, G.T.

Studying the thermoelectric properties of tellurium compounds.
Teploenergetika [Energ.inst.] no.3:37-57 '61. (MIRA 14:11)
(Tellurium compounds—Electric properties)

L 62248-65 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EEC(k)-2/EWG(m)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(h) IJP(c) RDW/JHB/JD/TT/WW/AT/GS

ACCESSION NR: AT5015787 UR/0000/65/000/000/0019/0022

AUTHOR: Baranova, R. Kh.; Deshina, N. F.

TITLE: Effect of additions on the thermoelectric characteristics of lead selenide

SOURCE: AN SSSR. Energeticheskiy institut. Ispol'zovaniye solnechnoy energii v narodnom khozyaystve SSSR (Use of solar energy in the economy of the U.S.S.R.). Moscow, Izd-vo, Nauka, 1965, 19-22

TOPIC TAGS: lead selenide, lead selenide thermoelectric converter

ABSTRACT: The results of an experimental investigation of the effect of Cu and Zn additions and stoichiometric composition of Se and Pb upon the thermoelectric characteristics of PbSe are reported. It is found that: (1) These alloys have the best mechanical characteristics: (a) for the negative branch of thermoelectric converters, 27.5% Se + 72.5% Pb; (b) for the positive branch, 29.3% Se + 70.7% Pb; (2) Optimal additions of Cu and Zn are: for p-type alloy, 0.22% Cu; for

Card 1/2

L 62248-65

ACCESSION NR: AT5015787

n-type alloy, 0.5% Zn; (3) Stable operation of thermoelectric converters can be expected, with 0.22% Cu, up to 770K; with 0.5% Zn, up to 870K. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 12Feb65 ENCL: 00 SUB CODE: EE

NO REF SOV: 003 OTHER: 000

Card 2/2 mp

S/070/61/006/003/004/009
E021/E435

24.7200(1144,1153,1160)

AUTHORS: Kurdyumova, R.N. and Baranova, R.V.

TITLE: Electron diffraction study of the structure of thin layers of copper-iodide

PERIODICAL: Kristallografiya, 1961, Vol.6, No.3, pp.402-405 + 1 plate

TEXT: Samples were prepared by evaporation from a tungsten vaporizer on to celluloid films and glass plates at room temperature. Some of the samples were heated afterwards at 100 to 120°C for 30 to 40 min in vacuo. The electronograph of the samples heated to 100 - 120°C showed that the samples were face centred cubic with a = 6.04 corresponding to the γ-modification of CuI. The electronographs of the unheated sample showed that the sample was hexagonal with a = 4.25 ± 0.01, c = 20.86 ± 0.06. The relationships between the two structures were as follows

$$a_{hex} = \frac{a_{cub}}{\sqrt{2}} \qquad c_{hex} = a_{cub} \cdot 2\sqrt{3}$$

It was proposed that the new hexagonal modification had 6-layered packing of I atoms with Cu atoms in the tetrahedral voids

Card 1/3

Electron diffraction ...

(Fig.4). The most probable packing was ABABAC. Fig.5 shows the proposed layered structure. The distance between the iodide and copper atoms was 2.61 Å. The closest distance between the atoms of copper was 3.0 Å. The hexagonal modification was obviously metastable, and was transformed to the γ form by heating to 100 to 120°C. The hexagonal modification had an anomalously high p-type electrical conductivity (10 ohm^{-1}cm^{-1}). The transformation to the cubic form on heating was accompanied by a sharp increase in electrical resistance. Acknowledgments are expressed to M.G.Kosaganova for her assistance with the measurements, to Professor Z.G.Pinsker and S.A.Semiletov for proposing and directing the work. There are 5 figures and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: October 8, 1960

Electron diffraction ...

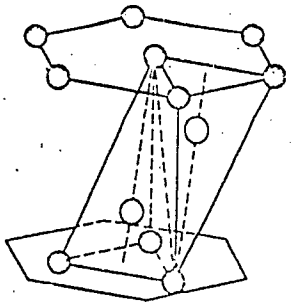


Fig.4.

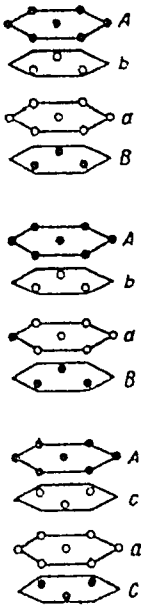


Fig.5.

Card 3/3

ACCESSION NR: AP4012281 S/0070/64/009/001/0104/0106

AUTHORS: Baranova, R. V.; Pinsker, Z. G.

TITLE: Investigation of the system Cu-Te in thin films

SOURCE: Kristallografiya, v. 9, no. 1, 1964, 104-106

TOPIC TAGS: Cu Te system, thin film, x-ray data, phase structure, lattice constant, beta sup I phase, beta sup II phase, beta sup III phase

ABSTRACT: Thin films of the Cu-Te system have been investigated in order to verify and to complete the existing crystallographic data on this material. The films were produced by vacuum sublimation of Cu and Te from the surfaces of previously heat-treated halite crystals at room temperature. After their deposition the films were held at various temperatures for various periods of time. Photographs taken obliquely to the molecular beam made it possible to determine the lattice constant as a = 3.10, b = 4.02, c = 6.86 Å. Films with high Cu, when heated for 2 hours at 100C, were found to contain (aside from CuTe) the hexagonal phases β^{I}, β^{II}, and β^{III}. The values of lattice constants for these phases are close to the whole multiples of a_0 = 4.24 and c_0 = 7.29 Å (β^{I}--$2a_0$ and c_0; β^{II}--$2a_0$ and $3c_0$; β^{III}--$2a_0$ and $5c_0$). No phase with constants a_0 and c_0 was found. A study of the rhombic

Card 1/2

ACCESSION NR: AP4012281

phase produced exact values of $z_{Te} = 0.223$, $z_{Cu} = 0.449$. These experiments did not confirm the results presented by H. Nowotny (Z. Metallkunde, 37, 40-42, 1946). The study of phase structure is being confirmed. Ye. Ye. Malitskiy participated in this work. Orig. art. has: 2 electronograms and 3 graphs.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography AN SSSR)

SUBMITTED: 23Mar63 DATE ACQ: 19Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 003

Card 2/2

BARANOVA, R.V.

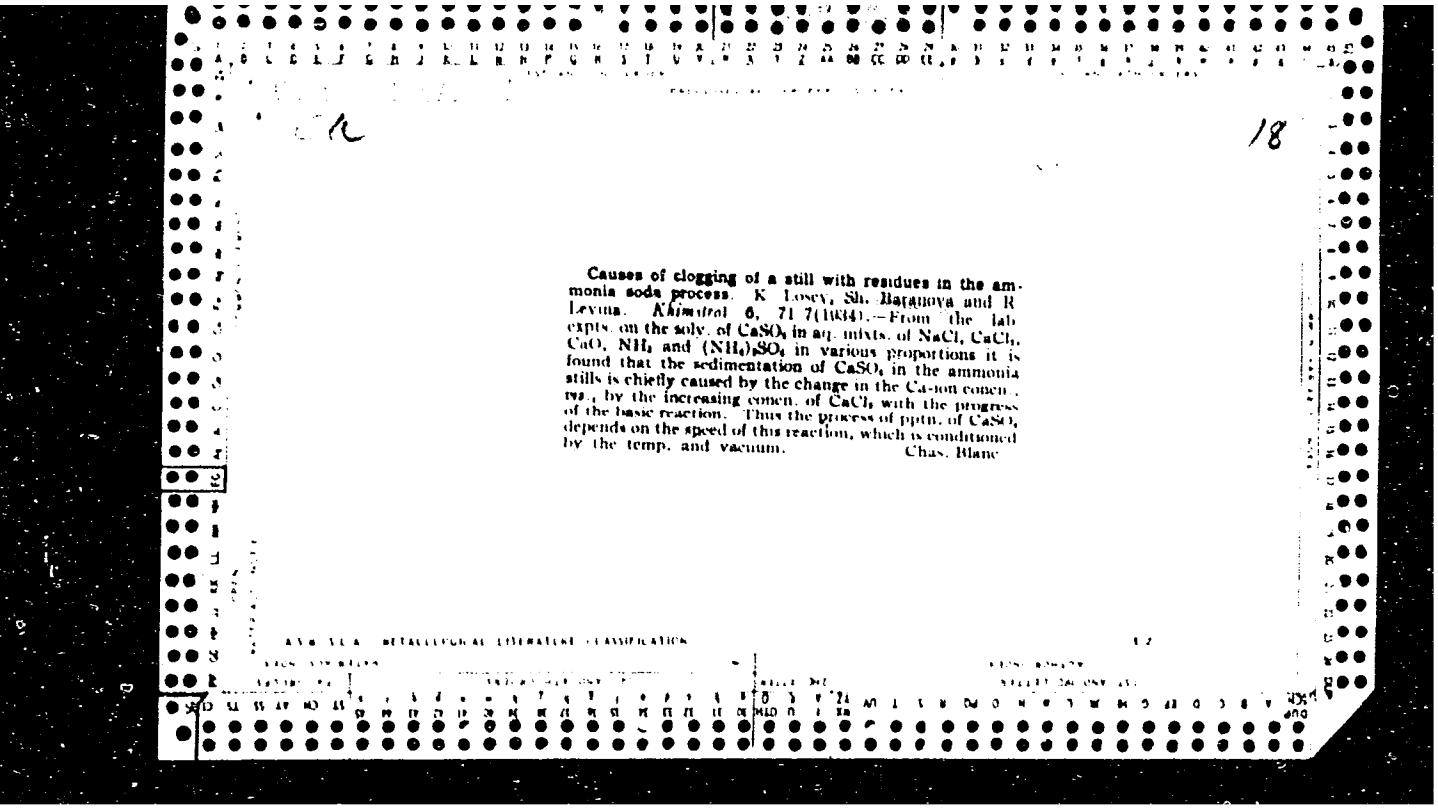
Electron diffraction study of the Ni – In system. Kristallografiia 10 no.1:32-36 Ja-F '65. (MIRA 18:3)

1. Institut kristallografii AN SSSR.

KHAZANOVA, Ye.; BARANOVA, S.; TOCHILKIN, M.; UKOLOV, P., inzh.

Without interrupting production. Okhr. truda i sots. strakh. 4 no.9:30-31 S '61. (MIRA 14:10)

1. Zaveduyushchaya profilaktoriyem fabriki "Skorokhod" (for Khazanova). 2. Doverennyy vrach oblastnogo soveta profsoyuzov, g. Leningrad (for Baranova). 3. Zaveduyushchiy profilaktoriyem fabriki "Kanat", g. Leningrad (for Tochilkin).
(MEDICINE, INDUSTRIAL)



12

18

Causes of clogging of a still with residues in the ammonia soda process. K. Losev, Sh. Baranova and R. Levina. *Khimstroi* 6, 71-7(1934).—From the lab. expts. on the soly. of $CaSO_4$ in aq. mixts. of NaCl, $CaCl_2$, CaO, NH_3 and $(NH_4)_2SO_4$ in various proportions it is found that the sedimentation of $CaSO_4$ in the ammonia stills is chiefly caused by the change in the Ca-ion concn., viz., by the increasing concn. of $CaCl_2$ with the progress of the basic reaction. Thus the process of pptn. of $CaSO_4$ depends on the speed of this reaction, which is conditioned by the temp. and vacuum. Chas. Blanc

BARANOVA, S.A.; KORKIN, Yu.G.; TERENT'YEV, Yu.Ya.; FAYGENBAUM, D.S.; ALEKSEYEVSKAYA, Ye.A., red.; KOVAL'SKAYA, I.F., tekhn. red.

[New types of general purpose resistance welding machines in the United States; a review] Novye konstruktsii kontaktnykh svarochnykh mashin obshchego naznacheniia v SShA; obzor. Moskva, TSentr. in-t nauchno-tekhn. informatsii mashinostroeniia, 1961. 52 p. (MIRA 14:11)

(United States—Electric welding—Equipment and supplies)

BARANOVA, S.I.; DUTIKOVA, E.A.

They reached the threshold of 1965. Tekst.prom. 20 no.6:89 Je '60. (MIRA 13:7)
(Vladimir Province--Textile industry)

SOV/110-58-12-11/22

AUTHOR: Baranova, T.A., Engineer

TITLE: Stabilising the Supply of Wind-Generated Power by Paralleling Several Generators (Povysheniye ravnomernosti vyrabotki elektroenergii pri parallel'noy rabote neskol'kikh vetroelektricheskikh generatorov)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 12, pp 41-43 (USSR)

ABSTRACT: The use of wind for electric power generation is very important in rural areas but wind-driven stations alone cannot yet supply power sufficiently uniformly without the use of special accumulator devices or spare engine-driven capacity. The Power Institute of the Academy of Sciences USSR has been investigating equalisation of electric power generation by connecting in parallel a number of wind-driven stations remote from one another. These investigations are based on a detailed study of wind-speed distribution in time and space. Improvement would only result from such inter-connection if at the same time the wind was of different strength in different places. As little was known about the structure of wind-flow at a height of 20 metres, an

Card 1/4

Stabilising the Supply of Wind-Generated Power by Paralleling Several Generators

experimental study of the question was necessary. Observations were made with anemometers in three places and it was found that the wind speeds were usually different in the three places as charted in Fig 1. For a more detailed study of wind-power distribution in space and time, again at a height of 20 metres, a new observation procedure was developed. It was then possible to measure wind power in some tens of places at a distance of 1 kilometer simultaneously and continuously. For this purpose the anemometer instruments were replaced by wind-electric generators type VE-2. All the generators were connected to common busbars, thus forming a miniature power system with a total power of 1kW, which was laid out on the right high bank of the river Istra at a height of 180 m above sea level. A schematic electrical circuit of the model is given in Fig 2 but shows only two of the ten generators. Loading was by 10 accumulators type 6STM-12 and a lamp rheostat. With this circuit it was possible to vary the power by altering the current

Stabilising the Supply of Wind-Generated Power by Paralleling Several Generators

at constant voltage. Tests carried out for 500 hours lead to the following conclusions: individual generators give widely varying outputs; the combined output of two paralleled generators is more uniform but is still quite variable; the output becomes more equalised as the number is raised up to 10. This will be seen from Fig 3, which charts output as a function of the number of generators connected. The theory of correlation functions in relation to wind-driven power stations is outlined. Correlation functions were calculated for ten single-hour power recordings and are plotted in Fig 4. These curves were used to estimate the best distance between stations; the selected distance of 1 kilometer was found to be about right. Wind-power generator networks may be interconnected to regional power systems, which should be constructed in the first place in Kazakhstan, in regions near the sea,

SOV/110-58-12-11/22

'Stabilising the Supply of Wind-Generated Power by Paralleling Several Generators

in the far north and in other districts with large wind-power resources. There are 4 figures.

SUBMITTED: 24th June 1958

Card 4/4

KLIMENKO, V.G.; GOFMAN, Yu.Ya.; BARANOVA, T.A.

Proteins and nonprotein nitrogen containing substances in the seeds and green bulk of some vetchling species. Trudy po khim. prirod. soed. no.3:27-39 '60. (MIRA 16:2)

1. Kishinevskiy gosudarstvennyy universitet. Laboratoriya khimii belka.
(Vetchling) (Plants--Chemical analysis) (Nitrogen)

SAYANOVA, V.V.; BEREZOVIKOV, A.D.; BARANOVA, T.A.

Variability in the protein and nonprotein nitrogen content during the ripening of the seeds of some bean species. Trudy po khim. prirod. soed. no.5:63-68 '62. (MIRA 16:11)

1. Laboratoriya khimii belka Kishinevskogo gosudarstvennogo universiteta.

BARON, N.M.; BARANOVA, T.A.; MATVEYEVA, R.P.

Density of sodium aluminate solutions at temperatures from 25 to 90°. Zhur. prikl. khim. 38 no.1:185-188 Ja '65.
(MIRA 18:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

KATCHENKOV, S.M.; BARANOVA, T.E.; FLEGONTOVA, Ye.I.

Distribution of minor elements and bitumens in Paleozoic clays of Volga-Ural region. VNIGRI no.105:261-269 '57. (MIRA 11:9)
(Second Baku--Bitumen) (Second Baku--Trace elements)

BAPANOVA, T.E.

Bitumen occurrences in crystalline basement rocks in regions of Second Baku according to the data of fluorescence analysis. Trudy VNIGRI no.155:62-74 '60. (MIRA 14:1)
(Second Baku--Bitumen) (Rocks, Igneous--Analysis)
(Fluorescence)

BARANOVA, T.E.; BIIALOVA, B.N.

Use of polybutylmethacrylate glue in making sections of bituminous rocks. Trudy VNIGRI no.174:260-261 '61. (MIRA 14:12)
(Acrylic acid)
(Bitumen)
(Fluorescence microscopy)

VASSOYEVICH, N.B., prof., doktor geol.-miner.nauk; ANDREYEV, P.F., kand. khim.nauk; BELYAKOV, M.F., kand.geol.-miner.nauk; BARANOVA, T.E., nauchnyy sotrudnik; BUSHINSKIY, G.I., prof.; GEKKER, R.F., prof., doktor biolog.nauk; GROSSGEYM, V.A., kand.geol.-miner.nauk; ITENBERG, S.S., dotsent; KRISHTOFOVICH, A.N.; LYUBOMIROV, B.N., kand.geol.-miner.nauk; PORFIR'YEV, G.S., kand.geol.-miner.nauk; POKROVSKAYA, I.M., prof., doktor geol.-miner.nauk; RADCHENKO, O.A., kand.khim.nauk; RUKHIN, L.B., prof., doktor geol.-miner.nauk; TORGOVANOVA, V.B., gidrogeolog; USPENSKIY, V.A., kand.khim.nauk; FROLOV, Ye.F., kand.geol.-miner.nauk; FURSENKO, A.V.; KHAIN, V.Ye., prof., doktor geol.-miner.nauk; SHARONOV, V.V., prof., doktor fiziko-matem.nauk; YASHCHURZHINSKAYA, A.B., vedushchiy red.; SOKOLOVA, Ye.V., tekhn.red.

(Continued on next card)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520003-7"

VASSOYEVICH, N.B.---(continued) Card 2.

[Handbook for field geologists and petroleum prospectors] Sputnik polevogo geologa - neftianika. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1952. 504 p. (MIRA 12:12)

1. Groznenskiy ordena Trudovogo Krasnogo Znameni neftyanoy institut (for Itenberg). 2. Deystvitel'nyy chlen AN Ukrainskoy SSR (for Krishtofovich). 3. Chlen-korrespondent AN Belorusskoy SSR (for Fursenko).

(Petroleum geology--Handbooks, manuals, etc.)

FLOROVSKAYA, V.N.; BARANOVA, T.E.; IL'INA, A.A.; KOPROVA, N.A.; NIKOLAYENKO, M.P.; SEMINA, M.D.

Reply to P.F.Andreev, E.M.Geller, A.A.Kartsev, and Z.M. Tabasaranskii's review on the book "Luminescence-bitumen analysis and its application in petroleum geology" by V.N. Florovskaia and others. Sov.geol. 3 no.5:123-127 My '60. (MIRA 13:7)

(Luminescence) (Bitumen)
(Andreev, P.F.) (Geller, E.M.) (Kartsev, A.A.)
(Tabasaranskii, Z.M.)

BESKROVNYY, N.S.; BARANOVA, T.E.

Petroleum bitumens in pegmatites and carbonatites. Dokl. AN SSSR 149 no.4:918-921 Ap '63. (MIRA 16:3)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut. Predstavleno akademikom N.M.Strakhovym.
(Bitumen)

L 18283-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPA(w)-2/EWP(b) Pt-10/Pu-4/Pab-10
WH
ACCESSION NR: AP4045452 S/0072/64/000/009/0026/0030

B

AUTHOR: Loshkarev, B. A. (Candidate of technical sciences); Sycheva, N. A. (Engineer); Barshova, T. P. (Engineer)

TITLE: Conditions for compressing briquetted masses based on materials of the $ZnO-TiO_2$ system

SOURCE: Steklo i keramika, no. 9, 1964, 26-30

TOPIC TAGS: ZnO TiO_2 system, briquetting, ceramic semiconductor, ceramic property stabilization

ABSTRACT: The effects of varying conditions in the preliminary briquetting of $ZnO-TiO_2$ materials and of the simultaneous addition of alumina and zirconia on the properties of the resultant ceramic semiconductors were studied. Using previously briquetted material reduced shrinkage and raised the stability of the properties of the final ceramics. Studies run on 77.5% ZnO-22.5% TiO_2 mixtures showed the following conditions to be optimum for briquetting the moist materials. Up to 70% solids was optimum, lesser amounts did not significantly affect shrinkage

Card 1/3

and other indices, but greater amounts impaired ceramic properties--increased porosity and decreased specific weight. Optimum firing temperature was about 1200C; the product obtained had a 14% linear shrinkage, specific weight of 4.67 gm/cm^3 and 2% water adsorption; higher temperatures weakened the briquet. A 3% aqueous solution of polyvinyl alcohol was an effective binder. In briquets comprising 80% ZnO, 20% TiO_2, 2 and 4% Al_2O_3 and 0.5, 1, 2, 3, 4, 6 and 10% ZrO_2, 8% by weight of the binder solution was optimum, and in compositions comprising 77% ZnO, 23% TiO_2, and reversed above proportions of Al_2O_3 and ZrO_2 required 9% binder; less binder did not gel and resulted in a product of lower mechanical strength. Optimum compression pressure was 500-600 kg/cm^2, although varying pressure from 300-800 kg/cm^2 had little effect on the properties of the fired samples. On changing pressure from 300-1200 kg/cm^2, the material contracted according to the A. S. Berezhnoy (Ogneuporty*, 1954, no. 4) equation $e = a-b \lg P$; at higher pressures the porosity of the brick did not approximate this equation. Maintaining the above conditions resulted in semiconductors having lower variation in their ceramic properties and in their specific resistance: in systems containing 67-70% ZnO resistivity varied from 10^3 to 10^{10} ohm. cm; in

L 18283-65
ACCESSION NR: AP4045452

briquets prepared under proposed conditions, the specific volume resistivity was maintained within the order of 10^5 ohm. cm and the specific surface resistivity, in the order of 10^6 ohm. Orig. art. has: 5 figures and 1 table

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Ural Polytechnical Institute)

SUBMITTED: 00 ENCL: 00

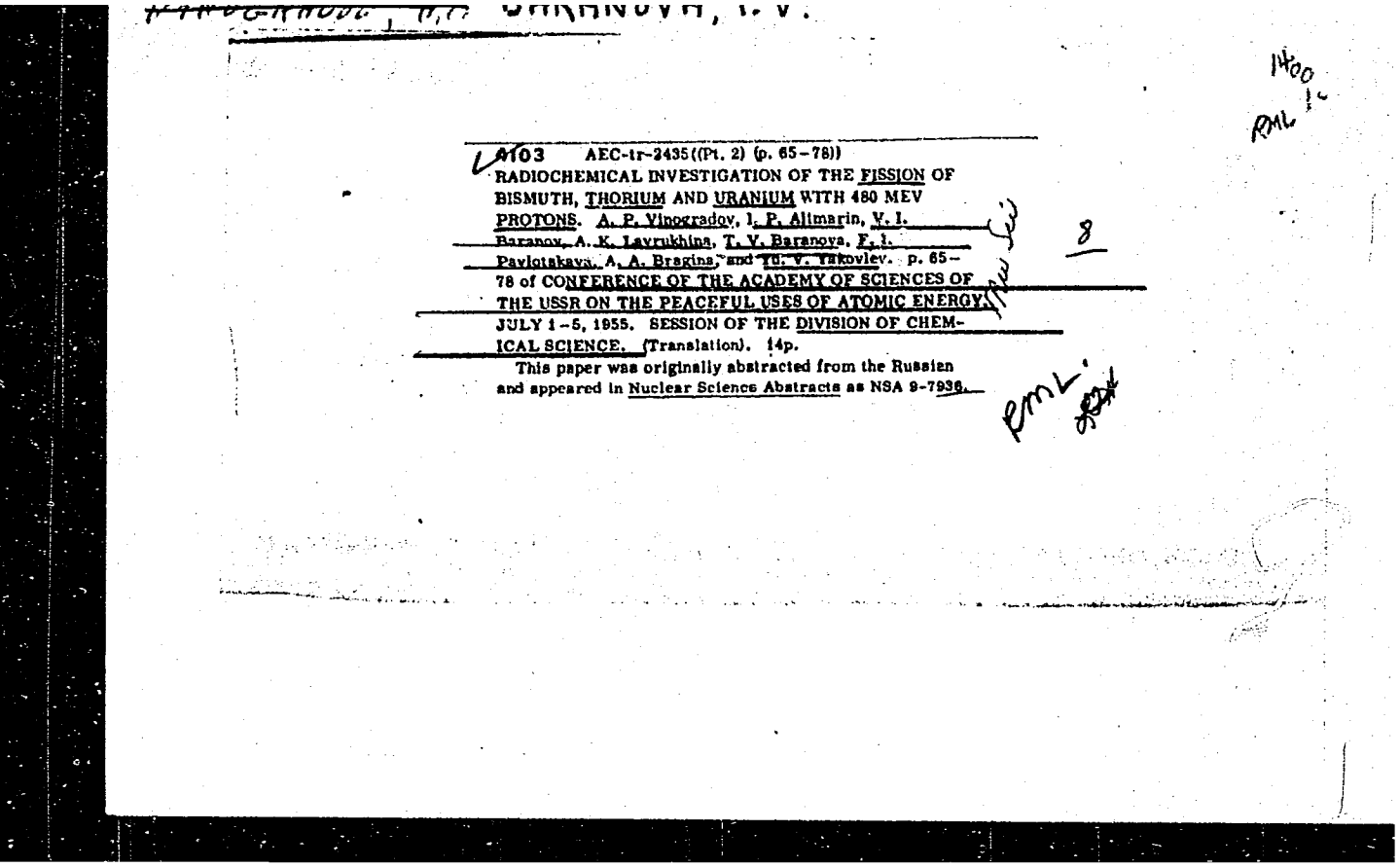
SUB CODE: MT NO REF SOV: 001 OTHER: 001

Card 3/3

FARBEROV, M.I.; USTAVSHCHIKOV, B.F.; KUT'IN, A.M.; BARANOVA, T.I.

Isocinchomeronic acid. Metod. poluch. khim. reak. i prepar. no.11:60-62 '64. (MIRA 18:12)

1. Yaroslavskiy tekhnologicheskiy institut i Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.



4103 AEC-tr-2435 ((Pt. 2) (p. 65-78))
RADIOCHEMICAL INVESTIGATION OF THE FISSION OF BISMUTH, THORIUM AND URANIUM WITH 480 MEV PROTONS. A. P. Vinogradov, I. P. Alimarin, V. I. Baranov, A. K. Lavrukhina, T. V. Baranova, F. I. Pavlotskaya, A. A. Bragina, and Yu. V. Yakovlev. p. 65-78 of CONFERENCE OF THE ACADEMY OF SCIENCES OF THE USSR ON THE PEACEFUL USES OF ATOMIC ENERGY, JULY 1-5, 1955. SESSION OF THE DIVISION OF CHEMICAL SCIENCE. (Translation). 14p.
This paper was originally abstracted from the Russian and appeared in Nuclear Science Abstracts as NSA 9-7938.

BARANOVA, T. V.

9

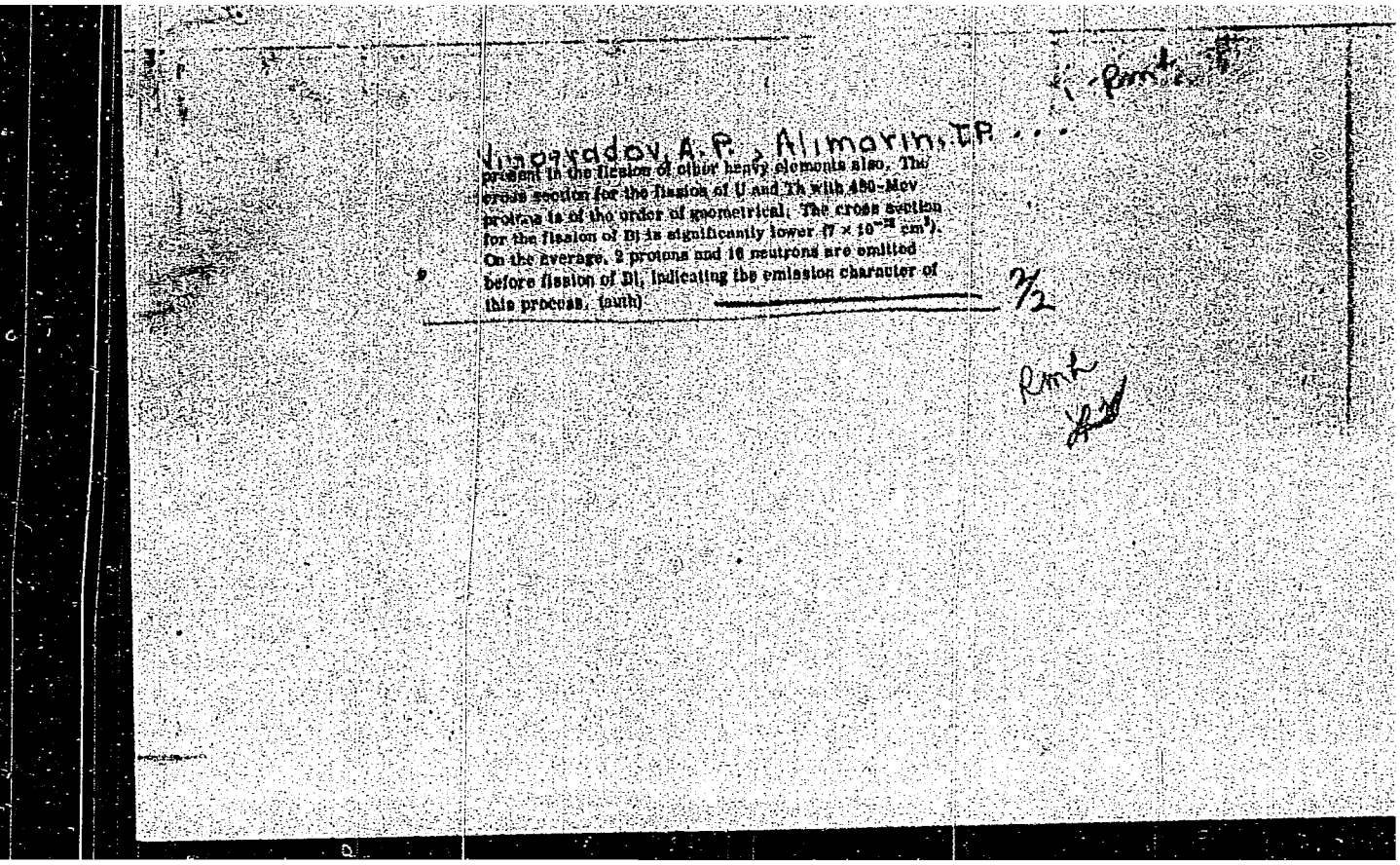
Radiochemical study of the products of high-energy spallation of copper and bismuth. A. P. Vinogradov, I. P. Alimarin, V. T. Baranov, A. K. Lavrukhina, T. V. Baranova, and E. I. Pavlotskaya. *Conf. Acad. Sci. U.S.S.R. on Peaceful Uses of Atomic Energy, Session Div. Chem. Sci.* 1955, 85–100(Engl. translation).—See *C.A.* 50, 6955c.
B. M. R.

6

BARANOVA, T.V.

1279. AEC-tr-3357
RADIOCHEMICAL STUDY OF THE FISSION PRODUCTS OF BISMUTH, THORIUM, AND URANIUM UPON BOMBARDMENT WITH 480 MEV PROTONS. A. P. Vinogradov, I. P. Alimarin, V. I. Baranov, A. K. Lavrukhina, T. V. Baranova, F. I. Pavlotskaya, A. A. Bragina, and Yu [illegible] V. Yakovlev. p. 7-119 in Meetings of the Division of Chemical Sciences, Session of the Academy of Sciences of the U.S.S.R. on the Peaceful Use of Atomic Energy. July 1-5, 1955. Moscow, Publishing House of the Academy of Sciences of the U.S.S.R., 1955. 378p.

Radiochemical investigations of the products of bombardment of U, Th, and Bi with 480-Mev protons have revealed similar nuclear processes. There has been observed the production of light elements, fission products, and spallation products in all cases. The detailed investigation of the fission of U, Th, and Bi with 480-Mev protons has shown that the yield mass curve is symmetrical with one wide maximum. The fission of these nuclei with fast protons does not produce long radioactive chains. There is observed the formation of a significant number of fragments emitting positrons and undergoing K-capture. All this points toward the evaporation of neutrons upon fission. It has been established that the characteristics of the fission of Th and U with fast particles of different energy are similar. This indicates that these characteristics will be



Vinogradov, A.P., Alimarin, I.P. . . .

present in the fission of other heavy elements also. The cross section for the fission of U and Th with 480-Mev protons is of the order of geometrical. The cross section for the fission of Bi is significantly lower (7×10^{-28} cm^2). On the average, 2 protons and 16 neutrons are emitted before fission of Bi, indicating the emission character of this process. [auth]

2/2

Rmt

BARANOVA, T. V.

800 I-PAL

Radiochemical study of the products of high-energy spallation of copper and bismuth. A. P. Vinogradov, I. P. Alimarin, V. I. Baranov, A. K. Lavrukhina, T. V. Baranova, and F. I. Pavlotskaya. *Sessiya Akad. Nauk S.S.S.R. po Mirnomu Ispol'zovaniyu Atomnoi Energii*, July 1-5, 1955, *Zasedaniya Otdel. Khim. Nauk* (Moscow) 132-57 (English summary, 157-9).—The spallation products of Cu nuclei bombarded with 280-m.e.v. deuterons and 480-m.e.v. protons as well as of Bi nuclei bombarded with 480-m.e.v. protons were studied by the radiochem. method. From the shape of the curve of the distribution yield of the residual nuclei vs. mass no., it was possible to establish the presence of a great variety of nuclear processes, e.g. the emission of light nuclei, the fission and spallation of nuclei, and secondary reactions increasing the at. no. of the initial nucleus. Cu spallation at 480 m.e.v. yielded predominantly neutron-deficient nuclei. However, only β-active nuclei were detected in the case of radioisotopes with $Z \leq 20$. The total cross section of the formation of radioactive products was 0.22×10^{-24} sq. cm. By extrapolation and interpolation, a complete spallation-yield picture for Cu bombarded with 680-m.e.v. protons was established. Stable isotopes accounted for 43% of the total cross section, neutron-deficient isotopes accounted for 40.4%, and isotopes with a neutron excess for 16.6%. The following isotopes show a max. yield $Cu^{61,63}$, Ni^{59}, Co^{57}, Fe^{53}, Mn^{51}, Cr^{51}, V^{48}, Ti^{47}, Sc^{46}, Cl^{34}, and K^{38}. The total cross section in this case was equal to 0.6×10^{-24} sq. cm., which is about 60% of the geometrical cross section of Cu nuclei. The spallation products of Bi bombarded with 480-m.e.v. protons were studied. The principal feature of this process is the predominant formation of nuclei with a marked neutron deficiency. The yield of Pb, Hg, and Pt isotopes increases with the decrease in their mass nos. The cross section of Bi spallation is about 1.0×10^{-24} sq. cm. The following hitherto unknown radioisotopes of Hg were discovered among the spallation products: Hg^{197}, Hg^{193}, Hg^{192}, Hg^{191}, Hg^{189m}. J. R. Leachman

FERDINAND, Ya.M. (Rostov-na-Donu); Prinimali uchastiye: MARISOVA, A.P.; BRAYNINA, R.A.; MARGULIS, L.A.; MYASNENKO, A.M.; KOVALEVSKAYA, I.L.; TELESHEVSKAYA, E.A.; SOBOLEVA, S.V.; KALININA, K.I.; KOVALEVA, N.S.; IVANOVA, M.K.; ARENDER, B.A.; KUCHERENKO, R.A.; MANATSKOVA, K.S.; OLEYNIKOVA, L.T.; KIBARDINA, Yu.A.; GRIGOR'YEVA, K.S.; SEMENIKHINA, L.G.; CHERNYKH E.I.; DOROFEYEVA, V.M.; SHEVCHENKO, Ye.N.; ABRAMOVA, O.K.; SKUL'SKAYA, S.D.; PETROVA, Z.I.; MAKHLINOVSKIY, L.I.; KUZ'MINA, A.I.; AL'TMAN, R.Sh.; MARDERER, R.G.; YENGALYCHEVSKAYA, L.N.; CHIRKOVA, M.N.; TERESHCHENKO, N.I.; SHELKOVNIKOVA, M.A.; PROKOPENKO, V.V.; BEKLEMESHEVA, Ye.A.; BARANOVA, T.V.

Effectiveness of specific prophylaxis with alcohol divaccine against typhoid and paratyphoid B fever in school-age children. Zhur. mikrobiol., epid. i immun. 41 no.1:23-27 Ja '64.
(MIRA 18:2)

IGNAT'YEVA, G.V.; SARAYEVA, N.T.; KHROMETSKAYA, T.M.; LEBEDEVA, A.G.; MASTYUKOVA, Yu.N.; NESTEROVA, T.P.; ALAFUZOVA, S.B.; YERSHOVA, A.S.; BARANOVA, T.V.; BEKLEMESHEVA, Ye.D.; SHIPOVA, Ye.P.; SUKHANOVA, R.V.; KHIYABICH, G.N.; KHANTSIS, S.S.

Clinical and epidemiological effectiveness of a reduced dose of γ-globulin (1.5 ml) in seroprophylaxis of measles. Zhur.mikrobiol., epid. i immun. 42 no.12:57-61 D '65. (MIRA 19:1)

1. Moskovskiy institut epidemiologii i mikrobiologii; Institut virusologii imeni Ivanovskogo AMN SSSR; Moskovskaya sanitarno-epidemiologicheskaya stantsiya; Rybinskaya sanitarno-epidemiologicheskaya stantsiya; Vladimirskaya sanitarno-epidemiologicheskaya stantsiya i Ob"yedinennaya detskaya poliklinika, Makhachkala.

BARANOVA, T.Yu.

Interpretation of the data of the luminescence study of bitumens.
Trudy VNIGRI no.227 Geokhim.sbor. no.9:255-258 '65.
(MIRA 18:1)

VLADIMIROV, P., inzh.-ekonomist; BALANOVA, V., inzh.

Problems of settlement in the regional planning of [illegible] District, Ryazan Province. Eksper. proekt. no.[illegible] '62.

(MIRA 18:9)

BARANOVA, V.

Improving the technology of producing hard alloys. TSvet. met. 29 no.7:89-90 Jl '56. (MLRA 9:10)

(Tungsten alloys--Metallurgy) (Vanadium alloys--Metallurgy)

LOGINOV, V.; VOYNOV, A.; BARANOVA, V.; PETROV, A.

To all young engineers and technicians, agricultural specialists, students of institutions of higher learning and technical schools. NTO 2 no.10:5-6 O '60. (MIRA 13:10)

1. Sekretar' partiynogo byuro Yaroslavskogo zavoda toplivnoy apparatury (for Loginov). 2. Predsedatel' zavkoma profsoyuza Yaroslavskogo zavoda toplivnoy apparatury (for Voynov). 3. Sekretar' Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi Yaroslavskogo zavoda toplivnoy apparatury (for Baranova). 4. Predsedatel' soveta nauchno-tekhnicheskogo obshchestva Yaroslavskogo zavoda toplivnoy apparatury (for Petrov).
(Technological innovations)

BARANOVA, V. A.

1. PROKOSHEV, S. M., PETROCHENKO, Ye. I., IL'IN, G.S., BARANOVA, V. A., LEBEDEVA, N.A.

2. USSR 600

4. Solanaceae

7. Glucoalkaloiks in leaves and tubers of begetative grafted Solanaceae. Dokl. AN SSSR 83, No. 6. 1952 Institut Biokhimii im. A. N. Bakha Akademii Nauk SSSR
rcd. 1 Feb. 1952

9. Monthly List of Russian Accessions, Library of Congress, September 1952, UNCLASSIFIED

BARANOVA, V.A.

On the utilization of hydraulic cyclones in ore concentration.
TSvet.met. 28 no.6:58-59 N-D '55. (MIRA 10:11)
(Ore dressing) (Separators (Machines))

BARANOVA, V.A.

Use of radioactive tracers and radiation in the nonferrous metallurgical industry. TSvet.met. 29 no.3:83-85 Mr '56. (MLRA 9:7)
(Nonferrous metal industries) (Radioactive tracers--Industrial applications)

BARANOVA, V.A.

Dust removal in the crushing and transportation buildings of nonferrous metallurgical plants. TSvet.met. 29 no.11:81-83 N '56. (MLRA 10:1)

(Dust--Removal) (Nonferrous metal industries)

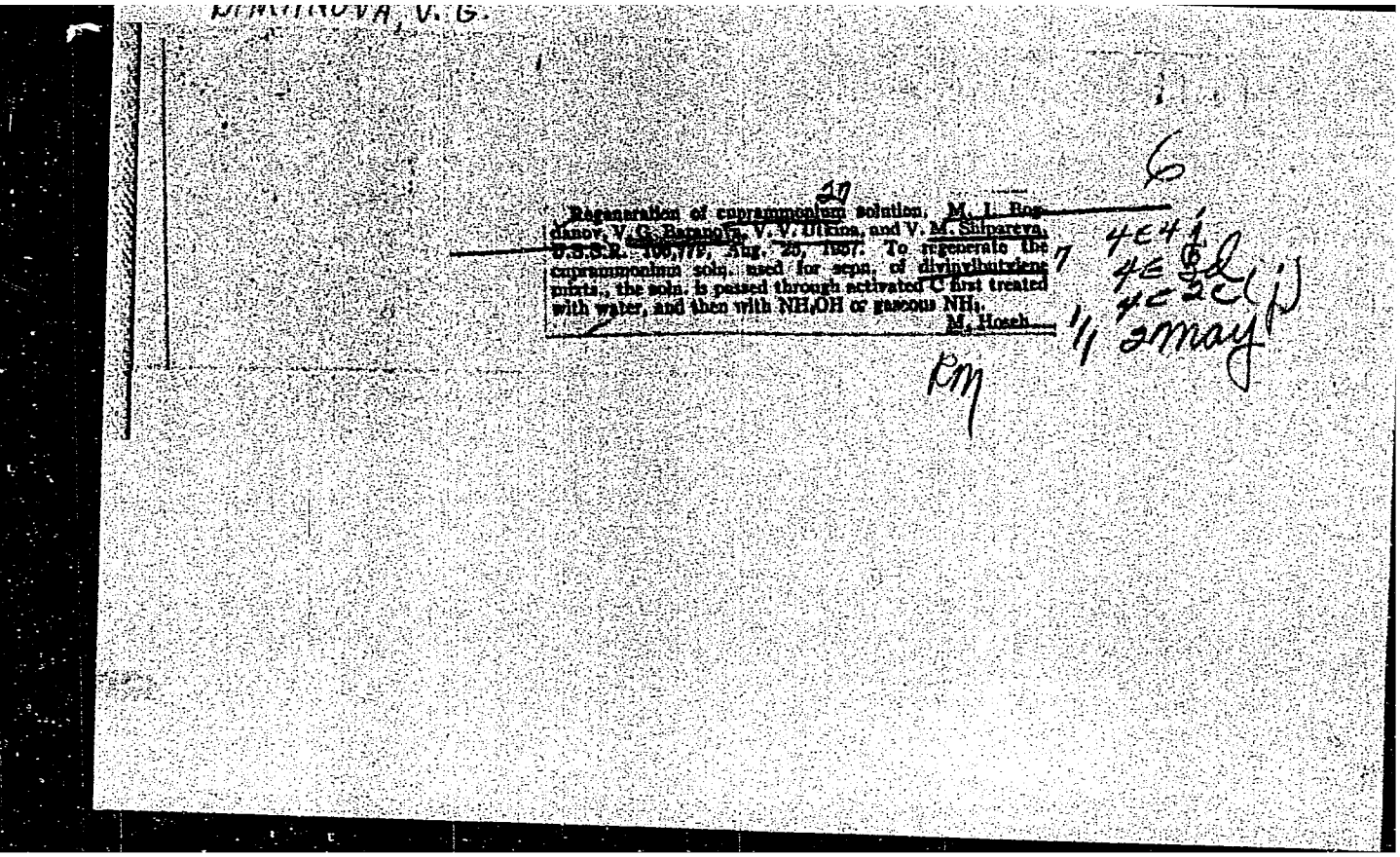
BARANOVA, V.A.

Approximation by rational fractions of a function, regular on a closed finitely connected region. Vest. LGU 20 no.13:159-161 '65.
(MIRA 18:7)

ZMANOVSKIKH, L.K., otv. red.; BARANOVA, V.B., otv. za vypusk;
RASINA, T.V., tekhn. red.

[The economy of Irkutsk Province; statistical abstract]
Narodnoe khoziaistvo Irkutskoi oblasti; statisticheskii
sbornik. Irkutsk, Gosstatizdat, 1962. 261 p.
(MIRA 16:6)

1. Irkutsk (Province) Oblastnoye statisticheskoye upravleniye.
(Irkutsk Province--Statistics)



BANKOVA, V. G.

Regeneration of cuprammonium solution. M. I. Bogdanov, V. G. Banova, V. V. Ufkina, and V. M. Shipareva. U.S.S.R. 100,779, Aug. 25, 1955. To regenerate the cuprammonium soln. used for sepn. of divinylbutadiene mixts., the soln. is passed through activated C first treated with water, and then with NH_4OH or gaseous NH_3.
M. Hosch

ACCESSION NR: AP4020039

S/0032/64/0030/003/0281/0284

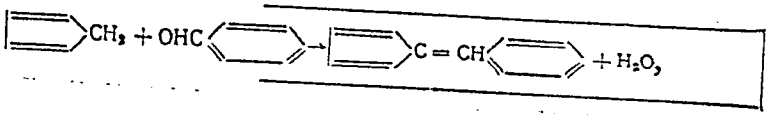
AUTHORS: Baranova, V. G.; Moskvin, A. F.; Kurochkina, T. F.

TITLE: Colorimetric determination of cyclopentadiene admixture in isoprene

SOURCE: Zavodskaya laboratoriya, v. 30, no. 3, 1964, 281-284

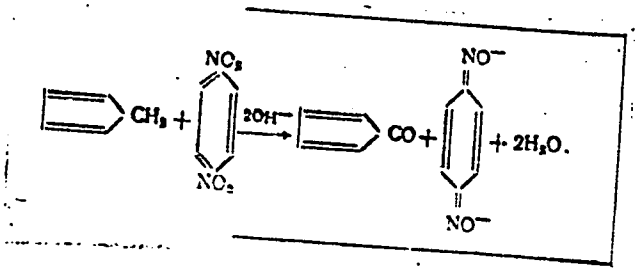
TOPIC TAGS: cyclopentadiene, isoprene, benzaldehyde, condensation, p dinitrobenzene, phenylfulvene, optical density, colorimetric determination, dianion

ABSTRACT: Since isoprene obtained from crude petroleum contains cyclopentadiene (CPD), which inhibits polymerization in amounts over 0.0005%, it is important to be able to determine it quantitatively. Two colorimetric methods were developed by the authors, the first one based on the condensation of CPD with benzaldehyde according to the reaction:



Card 1/3

while the second method was based on the reduction of dinitrobenzene by CPD:



In the first method, 8 ml of a 3% ethanol solution of KOH, 8 ml of the analyzed isoprene, and 9 ml of a 5% ethanol solution of benzaldehyde were placed in a 25-ml volumetric flask, mixed, and allowed to stand for 3 minutes. The optical density of the developing color was measured in the 400-550 millimicron range by means of an FEK-N photoelectrocolorimeter, with a sensitivity of 6 x 10^{-4}% and an average error of not over 20%. In the second method, 0.3-5.0 gm of isoprene, 0.5 ml of a

ACCESSION NR: AP4020039

0.25% solution of p-dinitrobenzene in dimethylformamide, and 0.5 ml of a 10% aqueous solution of KOH were placed in a 25-ml volumetric flask and brought up to the mark by dimethylformamide. After standing 5 minutes, the optical density of the color of the dianion was measured at 620 millimicrons. The sensitivity of the method was 2×10^{-5}%, and the error did not exceed 20%. It took 20-25 minutes to perform the analysis. Orig. art. has: 1 chart, 3 tables, and 2 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka (Scientific Research Institute of Monomers for Synthetic Rubber)

SUBMITTED: 00 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 000 OTHER: 002

Card 3/3

L 14958-65 EWT(m)/EPF(c)/EWP(j)/ Pc-4/Pr-4/Pb-4 EDC(b)/SSD(a)/
AEDC(a)/AS(mp)-2 RM/MLK

ACCESSION NR: AT4048192 S/0000/64/000/000/0109/0115

AUTHOR: Baranova, V. G., Pankov, A. G., Khripin, E. G., Glazy*rina, R. V., Belyayeva, V. D., Obeshchalova, N. V., Dolgova, N. A., Kn/azeva, M. F., Mishina, A. V., Ivoylova, M. A.

TITLE: The use of gas chromatography in the production of monomers for synthetic rubber

SOURCE: Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po gazovoy khromatografii. 2d, Moscow, 1962. Gazovaya khromatografiya (Gas chromatography); trudy* konferentsii. Moscow, Izd-vo Nauka, 1964, 109-115

TOPIC TAGS: gas chromatography, monomer production, two-stage chromatography, integral volume detector, katharometer, hexene demethylation, synthetic rubber, isopentane dehydration, flame ionization detector, isoprene polymerization

ABSTRACT: This is a survey of applied and applicable methods for chromatographic analysis. For example, two-stage chromatography for contact separation of the following components is described: H_2, $N_2 + O_2$, CH_4, C_2H_6, C_3H_8, C_4H_{10}, C_4H_8 and C_4H_6. Integral volume detectors with autorecorders are applicable where no very low concentrations are involved (e.g. the mixture from the catalytic dehydration of isopentane).

Card 1/3

L 14958-65

ACCESSION NR: AT4048192

Chromatographic equipment with a katharometer is indicated for substances with a boiling point above 40-45C, those which dissolve easily in alkali or where low concentrations (less than 1%) have to be determined. This equipment is described and illustrated (chromatographic separation of complex mixtures from hexene demethylation, or of piperylene in isoprene concentrate). The sensitivity threshold may be increased by using a thermo-chemical monitor (from the Kh-2M apparatus). Standard calibration with an artificial mixture is required for this equipment. The calibration coefficients were found to be constant for considerable variations of concentration and some modification of test conditions. This set-up was also used to determine admixtures of butylenes and methyl-ethyl ether in divinyl of high purity and those of n-butylene in isobutylene. The sensitivity of gas chromatography may be increased by concentration of impurities to a degree where they can be detected, or by increasing the sensitivity of the detector. A flame-ionization detector has been used at the NIIMSK. This considerably facilitates control of product purity and makes possible determination of the basic polymerization centers; thus, e.g., cyclopentadiene was determined as one of the centers of catalytic isoprene polymerization, appearing as early as the dehydration stage. Orig. art. has: 2 tables and 4 figures.

ASSOCIATION: None

Card 2/3

L 14958-65

ACCESSION NR: AT4048192

SUBMITTED: 16Jul64 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 005 OTHER: 004

Card 3/3

TUR'YAN, Ya.I.; BARANOVA, V.G.; ALIFEROVA, V.A.

Separate potentiometric determination of formic acid, dimethylformamide. Zhur. anal. khim. 18 no.1:121-125 Ja '63. (MIRA 16:4)

1. Scientific-Research Institute of Monomers for Synthetic Rubber, Yaroslavl.
(Formic acid) (Dimethylamine)
(Potentiometric analysis)

BARANOVA, V.G.; MOSKVIN, A.F.; KUROCHKINA, T.F.

Colorimetric determination of cyclopentadiene admixture in isoprene. Zav.lab. 30 no.3:281-284 '64. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.

PASHCHENKO, N.M.; SOROKINA, Ye.D.; BARANOVA, V.G.

Quantitative determination of acetonitrile in isoprene, isoamylenes and their mixtures from infrared absorption spectra. Zav. lab. 31 no.2: 178-179 '65. (MIRA 18:7)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.

BARANOVA, V.I., inzh.; LAMPSI, A.I., prof., doktor tekhn.nauk [deceased]

Effect of repeated impacts on mechanical properties of steel. Izv. vys. ucheb. zav.; mashinostr. no. 10:103-105 '60. (MIRA 14:1)

(Steel--Testing)

MALAFEYEV, N.A.; MALYUSOV, V.A.; UMNIK, N.N.; SAKODYNSKIY, K.I.; ZHAVORNOKOV, N.M. Prinimali uchastiye: PODGORNAYA, I.V.; ABRAMOVA, V.P.; BARANOVA, V.I.

Determination of the fractionation factors of binary mixtures tetrachloroalkanes during vaporization in a high vacuum. Khim.prom. no.3:196-198 Mr '61. (MIRA 14:3)
(Paraffins) (Distillation, Fractional)

32660

18 1151

S/126/61/012/005/022/028
E040/E435

AUTHORS: Krishtal, M.A., Baranova, V.I.

TITLE: Internal friction and electrical resistivity of ferro-chromium alloys

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.5, 1961, 768-771

TEXT: Due to the ease of formation of chromium carbides, the mobility of the carbon atoms in solid solutions of ferro-chromium alloys can be appreciably affected and with it the mechanical properties of the metal. The problem was examned by determining the kinetics of carbides dissolution in chromium-containing solid solutions during their heating prior to quenching. For this purpose, measurements were made of the internal friction and electrical resistivity of wire-shaped specimens 0.7 mm in diameter and 160 mm long. The specimens were completely annealed by holding for 2 to 3 hours at 1050°C and quenched in water from 720 to 1200°C. Before quenching, the specimens were heated in vacuo for 10 to 40 minutes, depending on the Cr content. Internal friction was measured by the torsional pendulum method in

Card 1/3

Internal friction and electrical ...

vacuum relaxator apparatus. Annealed specimens containing chromium carbides were found to have no internal friction maximum on the temperature curve. However, specimens quenched from 800 °C gave internal friction maxima corresponding to 30 to 40 and 170 °C. The actual value of the internal friction peak rises with increasing temperature of quenching, reaches its maximum for the quenching temperature of 1050 °C and then drops. The height of both internal friction maxima was found to be dependent on the chromium content in the alloy. The specific resistivity of the specimens diminishes with increasing quenching temperatures (up to 1100 °C) and passes through a minimum at 1050 °C but it increases if the specimens are quenched from temperatures exceeding about 1100 °C. It is concluded that an increase of the quenching temperature leads to progressively higher carbon contents of the solid solution because of the rising solubility of chromium carbides. The concentration of carbon at points of its introduction into the solid solution rises up to a temperature of 1050 °C, while further heating above this temperature leads to the formation of vacancies which tend to be occupied by carbon atoms shifting from the points

Internal friction and electrical ...

of their original introduction. The lower temperature internal friction maximum (30 to 40°C) is believed to be connected with carbon migration in the stress field around the iron atoms. The high temperature internal friction maximum (170°C) is thought to be connected with the migration of carbon atoms in the solid solution around the chromium atoms and, perhaps, with their migration to positions surrounded by iron atoms. There are 4 figures and 5 Soviet-bloc references.

ASSOCIATION: Tul'skiy mekhanicheskiy institut
(Tula Mechanics Institute)

SUBMITTED: March 20, 1961 (initially)
May 8, 1961 (after revision)

Card 3/3

4080

S/126/62/014/002/014/018
E073/E192

AUTHORS: Baranova, V.I., and Golovin, S.A.

TITLE: Influence of the quenching temperature on the internal friction and the electric resistance of iron-molybdenum alloys

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.2, 1962, 296-298

TEXT: In an earlier paper the authors and their team studied the influence of the quenching temperature of a chromium-alloyed alloy on the internal friction and the specific electric resistance. In this paper the authors studied these characteristics for alloys with molybdenum contents varying between 0.78 and 8.37% wt. and 0.019-0.037% wt.C. The internal friction and the electric resistance were measured on wire specimens 160 mm long and 0.7 mm in diameter. The curves of the internal friction as a function of the damping temperature for a specimen with 0.78% wt. Mo and 0.019% wt. C show a peak at a temperature of 36 °C. The magnitude of the peak decreases with increasing Mo content. Heating of Fe-Mo alloys to 1050 °C brings about intensive dissolution of carbides,
Card 1/3

with the carbon passing into the solid solution. Heating of the alloy prior to quenching to temperatures exceeding 1050 °C leads to an appreciable migration of the carbon atoms into the forming vacancies. For equal alloying in terms of atomic percentage the relaxation effects of internal friction are considerably less pronounced for Fe-Mo alloys than for Fe-Cr alloys. This is attributed to the fact that molybdenum is a more intensive carbide-forming element than chromium. Fe-Mo alloys with over 3 [illegible] do not show a low temperature peak but peaks are observed in the temperature ranges 230 and 390 °C. The electric resistance increased with the molybdenum concentration and was found to be a function of the quenching temperature in the same way as internal friction. Alloys containing 0.78, 1.02, 3.67 and 5.67% Mo, had electric resistance decreasing with increasing quenching temperature, the minimum being 1050-1100 °C and caused by the dissolution of carbides and homogenization of the alloy. Further increase in the quenching temperature led to an increase of the electric resistance due to the influence of vacancies. The electric resistance of alloys containing over 5.67% Mo increased with

increasing quenching temperature, reaching a maximum on heating up to 1100 °C, and then decreasing. This characteristic of the curves requires clarification.
There are 3 figures.

ASSOCIATION: Tul'skiy mekhanicheskiy institut
(Tula Mechanical Institute.)

SUBMITTED: September 4, 1961

L 13986-65 EWT(m)/EWP(w)/EWA(d)/EWP(t)/EWP(b) ASD(m)-3/SSD/AFWL/AFTC(p)
MJW/JD/MLK
ACCESSION NR: AT4048128 S/0000/63/000/000/0128/0133

AUTHOR: Krishtal, M. A., Golovin, S. A., Maksimov, S. K., Vayner, Yu. I., Baranova, V. I., Pudoveyeva, V. P.

TITLE: Internal friction, structure and mechanical properties of alloys deformed under static and impulse loads

SOURCE: Vsesoyuznaya konferentsiya po relaksatsionny*m yavleniyam v metallakh i splavakh. 3d, Voronezh, 1962. Relaksatsionny*ye yavleniya v metallakh i splavakh (Relaxation phenomena in metals and alloys); trudy* konferentsii. Moscow, Metallurgizdat, 1963, 128-133

TOPIC TAGS: low carbon steel, austenitic steel, aluminum alloy, internal friction, alloy structure, cold working

ABSTRACT: The authors investigated the mechanical properties of low carbon steel (0.90% C), austenitic steel grade 1Kh18N9T and OT-4 and AMg5VM alloys based on titanium and aluminum, respectively, under static and impulse loads. The phase condition of the metals was determined by X-ray under initial and deformed conditions. Initially, the OT-4 alloy is a solid solution of alpha-titanium with 3-5% beta phase containing Ti and Mn. In the other alloys, no noticeable changes were

Card 1/3

L 13986-65
ACCESSION NR: AT4048128

observed. Cold working of the samples was done under tension and in some cases by compression. The ultimate strength was determined on the M/91 machine (East Germany) at a strain rate of 6 mm/min. The flat samples were 120 mm long with a test length of 50 mm. The temperature dependence of the internal friction and rigidity modulus of wire samples (160 mm long and 0.8 mm in diameter) of low carbon steel, 1Kh18N9T steel and the aluminum alloy was determined on the RKF MIS vacuum torque pendulum at 1 cycle/second. Special attention should be paid to 1Kh18N9T steel, which was initially annealed at 1050C and had a single-phase structure. Under cold working, 1Kh18N9T steel reached an ultimate strength of 90 kg/mm^2 at a deformation of 40%, accompanied by an increased yield point, a sharp drop in elongation and a general lowering of the rigidity modulus. Internal friction was determined by the resonance method on a device designed by the Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys) with flat samples 80 mm long, 6 mm wide and about 1 mm thick at 100 cps. The tests indicate that at low distances the material becomes brittle and sometimes fails due to passage of the critical strain rate for the given material. Brittleness at longer distances is connected with interference interaction of primary and reflected impact waves

Card 2/3

L 13986-65
ACCESSION NR: AT4048128

leading to multiple deformation of the product. The increase in friction between the billet and die is of considerable importance. Plate samples 170 mm long, 11 mm wide and 2 mm thick were used to find the amplitude relationship of internal friction. It was found that surpassing some optimal loading rate may lead to hardening of the material and to simultaneous increase in brittleness due to formation of microcracks. Two competitive mechanisms (strengthening and weakening) appear at the same time under impulse loads. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Institute of Mechanics)

SUBMITTED: 10Nov63 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 001

Card 3/3

ACCESSION NR: AR4041603

S/0137/64/000/005/I033/I033

SOURCE: Ref. zh. Metallurgiya, Abs. 5I206

AUTHOR: Baranova, V. I.

TITLE: Relaxation processes in systems of iron-chromium and iron-molybdenum

CITED SOURCE: Sb. Relaksats. yavleniya v met. i splavakh. M., Metallurgizdat, 1963, 140-146

TOPIC TAGS: iron alloy, chromium, molybdenum, relaxation process

TRANSLATION: Temperature dependencies of internal friction Q^{-1} and of strength of heat-treated Fe-alloys, alloyed with Cr (0.85 - 4.70%) and Mo (0.78 - 3.67%) were investigated. Internal friction was measured with the help of vacuum relaxation oscillator RKF-MIS on wire samples 0.6 mm in diameter and 160 mm in length with frequency of torsional oscillations ~1 cycle per second. After complete annealing samples were subjected to hardening from 700 - 1200°; heating and holding under hardening were carried out in vacuum. On curves of temperature

Card 1/3

ACCESSION NR: AR4041603

dependency of internal friction of hardened alloys there are 2 peaks: at ~40° (peak A) and at ~200° (peak B). Peak A is caused by migration into field of stresses of interstitial atoms of C located in the vicinity of atoms of Fe. For alloys Fe-Cr and Fe-Mo the magnitude of the peak grows with rise in temperature of hardening to 1050°, and then decreases, which is caused by increase in the number of positions of the type Fe-C-Fe with rise in temperature to 1050°; with further heating in alloy there occurs intense formation of vacancies, part of atoms of C replaces vacancies, and the number of positions of introduction of Fe - C - Fe decreases, which leads to lowering of height of peak of internal friction. Height of peak A decreases with increase of content of Cr and Mo in alloy, which is explained by decrease of number of positions of Fe - C - Fe because of increase of content of carbide-forming element in solid solution and decrease of quantity of C in ferrite. Magnitude of peak B also is determined by temperature of hardening and content of Cr. With growth of content of Cr peak B is increased and is shifted in the direction of high temperatures. With increase of temperature of hardening the height of peak B increases, which can be caused by increase of number of dislocations, created as a result of thermal stresses. Magnitude ρ of hardened alloys decreases with growth of temperature of hardening, reaches

Card 2/3

ACCESSION NR: AR4041603

minimum at 1050°, and then increases. Decrease of ρ is connected with dissolution of carbides and partial homogenization of alloy; growth of ρ is caused by formation of vacancies during heating. Strength of alloys is increased with increase in temperature of hardening, reaches maximum at 1050°, and then decreases. Character of change of investigated properties is connected with influence of intragranular structure of austenite. Bibliography: 8 references.

SUB CODE: MM

ENCL: 00

Card 3/3

KRISHTAL, M.A.; BARANOVA, V.I.

Temperature dependence of vacancy concentration in iron-chromium, iron-molybdenum alloys. Fiz. met. i metalloved. 16 no.4:626-628 O '63. (MIRA 16:12)

1. Tul'skiy mekhanicheskiy institut.

L 8555-65 EWT(m)/EWP(k)/EWP(q)/EWP(b) Pf-4 AFETR/AFWL/ASD(m)-3/SSD/
RAEM(t) MJW/JD/HW

ACCESSION NR: AR4044215 S/0137/64/000/006/I039/I040

SOURCE: Ref. zh. Metallurgiya, Abs. 61231

AUTHOR: Krishtal, M. A.; Golovin, S. A.; Maksimov, S. K.; Vayner, Yu. I.; Baranova, V. I.; Pudoveyeva, V. P.

TITLE: Internal friction, structure, and mechanical properties of statically-deformed alloys

CITED SOURCE: Sb. Relaksats. yavleniya v met i splavakh. M., Metallurgizdat, 1963, 128-133

TOPIC TAGS: internal friction, structure, mechanical property, deformed alloy, statically deformed alloy, austenitic steel

TRANSLATION: Investigation was conducted on low-carbon steel (0.09% C), austenitic steel 1Kh18N9T and alloys OT-4 and AMg5VM on Ti- and Al-bases under conditions of static and pulse loads. Static work hardening of flat samples was produced by extension and in certain cases by pressing in a special [pinch] die. Tensile

Card 1/3

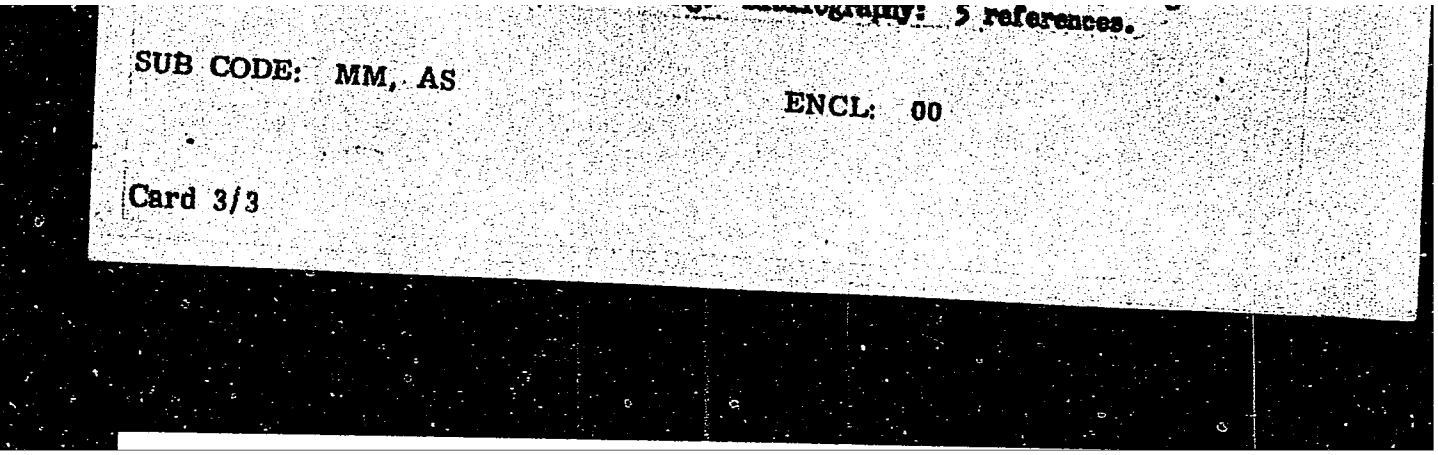
L 8555-65
ACCESSION NR: AR4044215

tests were done on a machine of type M/91 at a rate of load of 6 mm/min. The temperature trend of internal friction and the shear modulus of plastically deformed wire samples 160 mm long and 0.8 mm in diameter were measured on a vacuum torsional pendulum of type RKF MIS at a frequency of ~1 cps. Static work hardening in this case was carried out by drawing. Steel 1Kh18N9T preliminarily quenched from 1050°, under the influence of work hardening acquires increased hardness; here σ_s attains 90 kg/mm at 40% deformation. An increase of σ_s is accompanied by: 1) an increase in the yield point, which for steel in the initial state does not exceed 0.45 σ_s and attains 0.90 σ_s and more after 46% deformation; 2) a sharp drop of δ and ψ to 10 and 30%, respectively, during 46% deformation; 3) a decrease in the shear modulus. The intensity of the change of the mechanical properties during work hardening is from 10 to 30% greater than for other values of deformation. Lowering of the defect of the shear modulus with 5% deformation is then replaced by its increase. However, the magnitude of the shear modulus in work-hardened steel does not exceed that in initial state. The intensity of a decrease in shear modulus with a rise in temperature in initial- and slightly-deformed steel is greater than in strongly work-hardened samples. For steel in the quenched state, no peaks of internal friction on the curve of the temperature dependence of internal friction is observed. Plastic deformation of 5% creates an internal-

Card 2/3

L 8555-65
ACCESSION NR: AR4044215

friction peak at 20% (connected with diffusion in γ-Fe) and a small peak at 280-300°, which increases up to 33% deformation and disappears at higher degrees of deformation (60%). This latter peak is associated with the formation of Cottrell atmospheres. Pulse loading of sheet material is carried out with explosive forming. The internal friction of deformed billets was measured by the resonance method on cantilevered laminated samples. There is shown the presence, in stamped products, of defects which increase the strength and decrease the plasticity of metals. Comparative analysis of the obtained data [illegible] amplitude dependence of internal [illegible]



...raphy: 5 references.

SUB CODE: MM, AS ENCL: 00

Card 3/3

35038
S/145/60/000/010/008/014
D211/D304

18.1110

AUTHOR: Baranova, V.I., Engineer

TITLE: The influence of repeated impacts on mechanical characteristics of steel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 10, 1960, 103 - 105

TEXT: '50A' steel specimens in normalized state were tested on impact fatigue testing machines. The ultimate tensile strength was measured after 1, 5, 20, 30 and 40 thousand impacts, each of 4.7 kgcm energy. The results are shown on a graph. The U.T.S. increases considerably, this being explained by the crushing of the brittle cementite network surrounding the ferrite grains. Each additional group of impacts adds to the dislocations of crystal network, thus increasing the U.T.S. The rate of increase of the U.T.S. is not uniform. To investigate the effect of compression on the U.T.S. new specimens were cut from the central part of a specimen previously tested and subjected again to 1, 5, 10, 30 and 40 thousand im-

Card 1/2

The influence of repeated impacts ...

parts; the result was a drop in the U.T.S. in comparison with that obtained previously. There are 3 figures, and 8 Soviet bloc references.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute)

SUBMITTED: June 15, 1959

Card 2/2

ACC NR: AR7005972 SOURCE CODE: UR/0277/66/000/011/0025/0025

AUTHOR: Golovin, S. A.; Baranova, V. I.; Kudinova, K. G.

TITLE: Relaxation and elastic characteristics of molybdenum

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 11.48.161

REF SOURCE: Sb. Proiz-vo stali i splavov i vliyaniye obrabotki na ikh svoystva. Tula, 1965, 42-49

TOPIC TAGS: molybdenum, elasticity, relaxation process, metal deformation

ABSTRACT: The authors study the effects which refining conditions, deformation and annealing parameters have on the relaxation and elastic characteristics of molybdenum. An RKFMIS vacuum-tube relaxation oscillator was used for measuring internal frittion and the square of the frequency of torsional vibrations as functions of temperature at a frequency of ~1 cps on a specimen 150 mm long and 1 mm in diameter. Deformation amplitude was $<10^{-6}$. Several maxima were observed on the curve for internal friction of molybdenum as a function of temperature in the regions from 40 to 80°C and from 120 to 180°C. The attenuation maxima on the temperature curve for internal friction in the regions from 40 to 80°C and from 120 to 180°C decreased as the annealing tempera-

Card 1/2

UDC: 669.293.5'24'71

Card 1/2